The Status of Water Quality in Arizona – 2004

Arizona's Integrated 305(b) Assessment and 303(d) Listing Report

DRAFT NOVEMBER 2003

Arizona 303d, 305b
2004 Admin Record
(2 of 3)
Box 6

- Resubmit draft list to public 1/20/2004 (including fixes to chronics not 4D category
30 day public comment
AAR = 45 days
Submittal of IR in mid to late April

EQR02-04

***Impaired Water Identification* Rule --** ADEQ developed the *Impaired Water Identification* rule (R18-11-601through R18-11-606) **(Appendix B)** as required in the state statute discussed above. These rules establish the following:

- "Credible data" criteria;
- Data submission and record keeping;
- General data interpretation requirements;
- Criteria for placing a surface water on the Planning List for further monitoring;
- Criteria for identifying a surface water as impaired and placing it and identified pollutants on the 303(d) List;
- Criteria for removing a pollutant or surface water from the 303(d) List; and
- Criteria for prioritizing the 303(d) listed waters for TMDL development.

Although the *Impaired Water Identification* rule regulates the listing of waters only, and does not set requirements on those waters not placed on the 303(d) List or Planning List, ADEQ has chosen to apply the same data interpretation criteria to all waters to maintain consistency of methods. Data which does not meet the "credible data requirements" will not be used to make any assessment, be it "attaining" or "impaired." All data collected by or submitted to ADEQ will be considered and noted in the monitoring tables, but will not be used to make an assessment if credible data requirements are not fulfilled.

Federal guidance and regulations

New Federal Guidance – In July 2003, EPA issued "Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act" concerning the development and submission of the 2004 305(b) water quality report and the 303(d) List of impaired waters. This guidance recommended, as it did for the 2002 assessment, that states submit an integrated water quality assessment report that included the state's 303(d) listed waters. **Table 1** indicates the information EPA requested, and where this information can be found in this report.

Table 1. EPA Requested Data or Information

Data or Information Requested	Data or Information Provided in This Report
Geographic delineations of each surface water assessed based on the new National Hydrography Dataset.	Arizona will be sending EPA the geographic delineations requested.
Status of and progress toward achieving comprehensive assessments of all waters.	Chapter VI provides an overview of surface water quality assessments and Chapter VII provides an overview of ground water quality assessments. ADEQ's monitoring programs are described in Chapter VIII.
Water quality standard attainment determinations for each surface water assessed.	Detailed monitoring information for each surface water assessed is provided in Chapter IV. Information is arranged by watershed. These tables clearly indicate the basis for each assessment.
Identify additional monitoring that may be needed to determine water quality standard attainment status and, if necessary, to support development of TMDLs.	The assessment tables in Chapter IV and the 5-category lists in Chapter V indicate whether a surface water will be on the Planning List or TMDL list and the pollutant(s) of concern. Monitoring activities are being developed based on this information.
Schedules for additional monitoring planned for each surface water assessed.	Chapter VIII describes ADEQ's monitoring programs, how these programs are integrated within the agency and with other agencies, and how waters are scheduled through a 5-year watershed monitoring cycle.
Surface waters and pollutants still requiring TMDLs.	Impaired waters which require TMDLs and their pollutants of concern are identified in the Category 5 list in Chapter V.
TMDL development schedules reflecting the priority ranking of each surface water and/or pollutant combination.	A priority ranking and a schedule for completing TMDLs for each pollutant impairing a surface water is provided in Chapter V.
A description of the assessment and listing methodology used to develop Clean Water Act section 303(d) Lists and section 305(b) Assessments.	Chapter III describes the assessment and listing methods used. Appendix B provides a copy of the *Impaired Waters Identification* rule and Arizona's statute concerning the listing process and TMDL development.
A description of the public participation process involved in developing the 303(d) list.	The public participation process is described later in this chapter.

EPA guidance suggests that surface waters be placed on the following five-part list of surface waters depending on the sufficiency of data and number of exceedances as defined in Arizona's assessment and listing methods (see discussion in Chapter III):

Category 1. Surface waters where all designated uses are being attained.

Category 2. Surface waters are attaining some designated uses but there are insufficient data to assess the remaining uses. Arizona has chosen to place surface waters assessed as "threatened" in this category as well.

Category 3. Surface waters with insufficient data to assess any designated use.

Category 4. Surface waters are assessed as "not attaining" one or more designated use but a Total Maximum Daily Load (TMDL) analysis will not be required for one of the following reasons:

- 4 A. A TMDL has already been completed and approved by EPA but the water quality standards are not yet being attained.
- 4 B. Other pollution control requirements are reasonably expected to result in the attainment of water quality standards by the next regularly scheduled listing cycle.
- 4 C. The impairment is not related to a "pollutant" loading but rather caused by "pollution" (e.g., hydrologic modification).
- 4D. Arizona has developed this subcategory for surface waters that would be impaired under the former turbidity standard (repealed in 2002). See discussion in next section.

Category 5. Surface waters are impaired for one or more designated uses by a pollutant and require development of a TMDL.

Note that EPA guidance suggests that waters assessed as "threatened" be placed in Category 5. Arizona will include "threatened" waters in Category 2 or 3 as "inconclusive" and in need of further monitoring until federal regulations clarify whether "threatened" waters must be included in the 303(d) List of impaired waters. Arizona is also waiting for EPA to establish clear methods for the trend analysis necessary to identify threatened waters (e.g. minimum number of samples needed to develop a trend). For this assessment, no waters were assessed as "threatened."

Federal Regulations -- Impaired water listing requirements are also established in federal regulations (40 Code of Federal Regulations parts 122, 124, and 130.7). These regulations were applied in this assessment.

Changes in the assessment process

Several major changes, summarized below, have been made to ADEQ's water quality assessment process since the last report in 2002.

Application of Chronic Standards -- ADEQ has developed a process for the use of chronic Aquatic and Wildlife water quality standards in the 2004 assessment. As assessments are not enforcement actions, the provisions in the Surface Water Standards to determine compliance with chronic aquatic and wildlife criteria (R18-11-120) were not applied. (Enforcement of a chronic standard violation requires that the geometric mean of the analytical results of the last four samples taken at least 24 hours apart exceed the standard.)

Acute and Chronic Standards

Some water quality parameters have both an "acute" and a "chronic" standard (**Appendix C**). Acute standards are generally higher than chronic standards and are developed to protect for short-term, high level exposures to the parameter of concern. Chronic standards are set lower than acute standards and are developed to protect for long-term, lower level exposure to a parameter.

Instead, a surface water is assessed as "impaired" based on a chronic water quality standard if 25% or more of the samples exceed the chronic standard when 10 or more samples have been collected. When there were fewer than 10 samples, a minimum of 3 exceedances of the chronic standards was sufficient for assessing the surface water as "impaired, because at 10 samples only 3 exceedances would cause a listing.

An exceedance rate of 11-14% when 10 or more samples, or 1 or 2 exceedances when less than 10 samples, will result in an assessment of "inconclusive" and place the surface water on the Planning List for further monitoring.

Turbidity and Suspended Sediment Concentration Standards - ADEQ repealed its turbidity standard in March of 2002 and adopted a suspended sediment concentration (SSC) standard of 80 mg/L, expressed as a geometric mean with a four sample minimum, to protect Aquatic and Wildlife designated uses. The new SSC standard is only applicable to samples collected at or near base flow, which the U.S. Geological Survey (USGS) defines as "flow sustained largely by ground water discharge." Precipitation events and runoff must be excluded.

As established in Arizona's *Impaired Water Identification* rule (**Appendix B**), more than one exceedance of this geometric mean standard would result in an

assessment of "impaired." One exceedance would be assessed as "inconclusive."

ADEQ encountered several obstacles in assessing using the new suspended sediment concentration standard, which are detailed further in Chapter III under "Turbidity and the New SSC Standard." The major difficulty was that ADEQ could not determined a scientifically-based method for determining base flow. Until a method of assessing SSC data is developed, ADEQ has taken the following steps to ensure that evidence of potential suspended sediment problems is not lost:

- Turbidity data have been included and assessed under the former standard. Any waters indicating impairment were assessed as "not attaining" and placed on the Planning List for further monitoring.
- Any sites indicating potential impairment based on the suspended sediment concentration standard were assessed as "inconclusive" and also placed on the Planning List for further monitoring.
- A table of lakes and streams potentially impaired due to suspended sediment or turbidity is included in Chapter VI along with a map showing their location in the state. These are the waters that will have high priority for further suspended sediment studies.

How is the assessment and listing approved?

The Arizona 2004 303(d) Submission to EPA – In accordance with Arizona Revised Statute (49-232.A), the proposed 303(d) List is submitted to EPA following public review and publication of the list and response to comments in the Arizona Administrative Register. The 303(d) List is due to EPA on April 1st of each even-numbered year. The 2004 Integrated Report will be available at ADEQs web site in Adobe PDF format at: www.adeq.state.az.us.

The table showing Category 5 surface waters is the list of impaired waters that is submitted to EPA in April 2004. The list identifies, by surface water segment, the pollutants or surface water characteristics not meeting surface water quality standards. EPA must approve this list and has the authority to add or remove surface waters from the list based on the federal Clean Water Act, regulations, or policies. Therefore, the list shown in this report can be modified by EPA. If changes are made, ADEQ will then provide a revised list on its internet site: www.adeq.state.az.us.

Public Participation in Arizona's Listing Process – Communicating with the public and promoting public input into the 303(d) listing process is an integral component of ADEQ's water quality management programs. A 30-day public review of this draft report is provided in November 2003. A copy of the report is posted on ADEQ's web site, notices are placed in six local newspapers throughout the state (Phoenix, Tucson, Flagstaff, Sierra Vista, Yuma, and St. Johns), and flyers concerning the public review are mailed to a list of interested persons. Copies of the draft report are available on CD, in hard copy, or as an electronic download from the Internet.

Arizona's TMDL statute provides that any party who submits written comments on the draft list may challenge a surface water listing. Any challenged listing will not be included on the initial submission to EPA, but may be subsequently submitted if the listing is upheld in the director's final administrative decision.

The response to comments and the draft 303(d) List is published in the Arizona Administrative Register on xxx, 2003, according to Arizona Revised Statue 49-232. Publication of the list in the Arizona Administrative Register is an appealable agency action and may be appealed by any party that submitted written comments on the draft list. If a notice of appeal of a listing occurs within the 45-day publication period in the Arizona Administrative Register, ADEQ cannot include the challenged listing in its initial submission to EPA until the listing is upheld by ADEQ's Director or if the challenge is withdrawn.

EPA List Approval Process -- Within 30 days of receipt of a completed listing package, EPA must act on a state's list and priority ranking. EPA may approve or disapprove the entire list or disapprove only deficient portions.

If it disapproves a portion, EPA must within 30 days identify corrections (i.e., surface waters, pollutant(s), priority rankings) needed to make the list consistent with EPA regulations. EPA must also initiate another public review and comment period. The agency publishes its intended revisions in the *Federal Register*, newspaper notices, and other methods of notifying interested parties.

At the end of the comment period, EPA will evaluate public comments and compile a revised list. This corrected list is sent back to ADEQ to be incorporated into the water quality management plans and used as Arizona's approved 2004 303(d) List.

EPA Action on the Methods – Arizona's *Impaired Water Identification* rule **(Appendix B)** establishes Arizona's 303(d) listing procedures. EPA provided comments on the rule in 2002 when it was developed. Although EPA does not have authority to approve this rule, EPA considers the methods it establishes when it reviews the 303(d) List Arizona submits. As described above, EPA may

cite any deficiencies it raised in comments as a factor in a decision to disapprove all or part of Arizona's 303(d) List.

After EPA's final action is taken, ADEQ will post the final 2004 303(d) List on its website. Copies of the 2002 303(d) List (the current list, until EPA approves the 2004 list) are downloadable from the ADEQ web site in Adobe PDF format at: www.adeq.state.az.us.

II. Water? All I See Are Dry River Beds!

Arizona's ecologic, hydrologic, and geographic diversity

Arizona is a large state with diverse ecological and geological conditions. Its geographical extent is equivalent to the combined size of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, and New York. All four of the deserts of North America occur in Arizona, along with three mountain ranges at or above 10,000 feet in elevation. An atlas of information **(Table 2)** provides statistics concerning population, land ownership, rainfall, and temperature in Arizona.

Ecoregions -- Ecoregions **(Figure 1)** identify areas of relatively homogeneous ecological systems. These areas were delineated on a national scale based on geology, natural vegetation, and soils. Arizona contains portions of five of the 76 ecoregions recognized in the United States (Omernik, 1987).

Ecoregions in Arizona

Arizona/New Mexico Mountains – low to high mountains with grazed forests and woodlands.
Arizona/New Mexico Plateau – tablelands with considerable to very high relief and plains with high mountains. The Plateau is differentiated from the Colorado Plateau by its semi-humid grassland.
Colorado Plateau – tablelands with considerable to very high relief, plains with high mountains, grazed open woodland, and some irrigated agriculture.
Southern Basin and Range – desert valleys with desert shrubland associations, separated by low mountains.
Southern Deserts – desert shrubland associations on desert plains, with abrupt high mountains providing "sky islands" containing higher elevation ecosystem communities.

Hydrologic Provinces – The U.S. Geological Survey has also divided the state into three physiographic and hydrographic provinces based on the occurrence of water, geology, and altitude (Anderson et al., 1992) **(Figure 2)**.

Hydrologic Provinces in Arizona

Basin and Range – broad, gently sloping valleys, separated by sharply rising mountain ranges ("sky islands") receive more precipitation than the desert lowlands (20 inch annual average at Chiricahua National Monument, compared to 4-12 inches annually in the low deserts). The basins are filled with several thousand feet of sediments overlain with stream alluvium. This alluvium forms the most productive aquifers in Arizona, from which approximately 97% of all ground water is pumped (Wilson, 1991). Depths to ground water range from land surface near perennial streams to as much as 1,300 feet below land surface near the mountain front.
Central Highlands – is a geologic and physiographic transition between the other two provinces. The type and distribution of aquifers vary, with alluvial aquifers occupying relatively small basins, aquifers in consolidated sedimentary rocks, and fractured aquifers in hard rocks. Most perennial streams in the state originate in this province, which receives the highest annual precipitation (16-32 inches.)
Plateau Uplands – underlain by extensive consolidated sedimentary rock formations. Most of the ground water in this province is withdrawn from these formations more than 1000 feet deep, although localized alluvial aquifers also provide some ground water. This province has annual precipitation ranging from 10-25 inches. The eastern half is a barren plateau, with isolated alluvial deposits occurring only as narrow strips along large drainages, while the western half (north of the Grand Canyon) is wooded plateaus and mountain peaks which rise higher than 8,000 feet in elevation.

Population – The 2000 census data indicates that most of Arizona's population (60%) is located in the Phoenix metropolitan area. Since 1990 the state's population has increased 40%, with the Phoenix area growing from 2,120,000 to 3,252,000 (45%).

Table 2. Arizona Atlas

Population	5,131,000 people (2000 Census) (40% increase since 1990) Phoenix metro area 3,252,000 (14th largest metro area in the US) Tucson metro area 844,000 Yuma metro area 160,000 Flagstaff metro area 122,366
Surface Area	113,635 square miles
Population Density (average)	45 persons per square mile (US density is 80 persons per square mile)
Land Ownership	28% Indian Lands 17% Bureau of Land Management 17% Individual and Corporate 15% Forest Service 13% State of Arizona 10% Other federal, county, municipal
Elevation Variation	Highest point 12,630 feet above sea level (Humphrey's Peak) Lowest point 70 feet above sea level (near Yuma)
Annual Long-term Average Precipitation[a]	Lowest 3 inches (Yuma) Highest 27 inches (McNary) Phoenix metro 7 inches
Temperature[a]	Average Daily: Highest 88 °F (Yuma) Lowest 45 °F (Flagstaff) Record temperatures: Highest 128 °F (Lake Havasu City) Lowest -40 °F (Hawley Lake)
Average Annual Withdrawal (acre-feet) [b]	Ground Water 4,264,000 acre-feet (1971-1990) Surface Water 2,961,000 acre-feet (1971-1990)
Approximate Acres of Riparian Areas[c]	266,786 acres located on 3,530 miles of perennial streams 165,000 acres located on 10,000 miles of intermittent streams

(a) Arizona Climatological Laboratory, 1994 (verbal communication)

(b) Arizona Department of Water Resources, 1994.

(c) Arizona Game and Fish Department, 1993 (perennial streams), 1997 (intermittent streams).

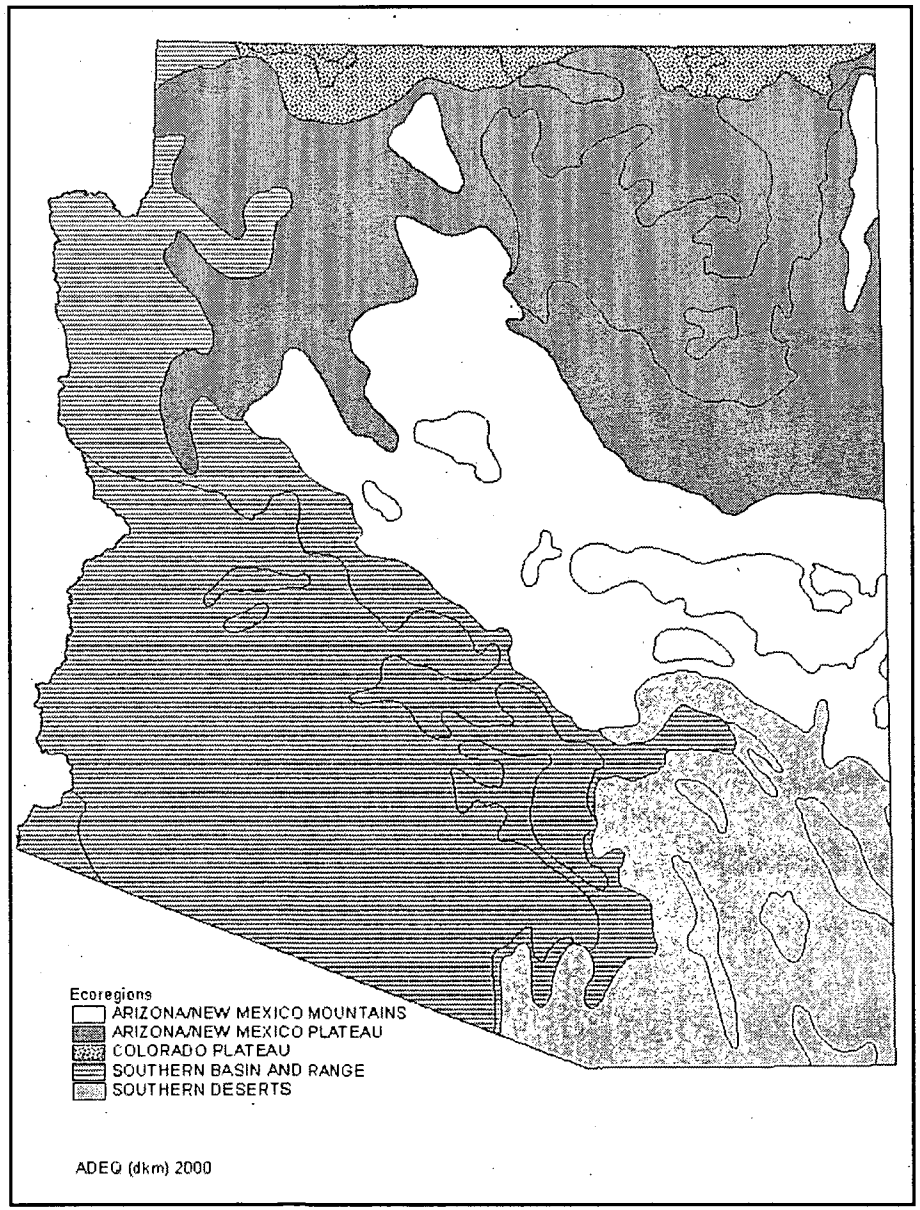


Figure 1. Arizona's Ecoregions

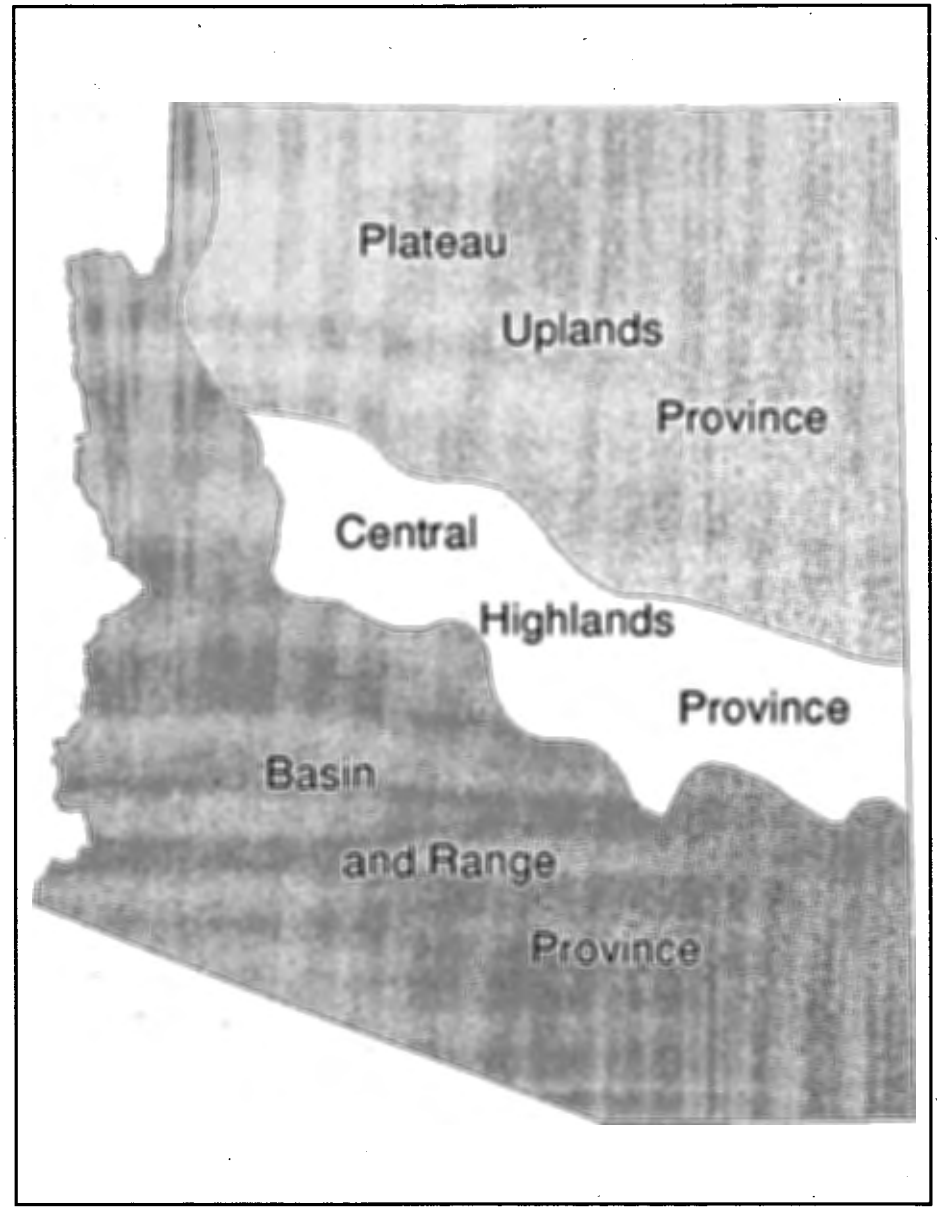


Figure 2. Arizona's Hydrologic Provinces

Land Ownership – Only 17% of the land within Arizona is privately owned, the remainder is owned by federal and state agencies and Indian Nations **(Table 2 and Figure 3)**. Land ownership can suggest land uses. For example, urban areas of population growth are generally restricted to privately owned lands, and irrigated agriculture primarily is associated with private and Indian lands. On the other hand, some activities such as mining and grazing are widespread across all types of ownership.

A significant part of the state (28%) is owned by Indian Nations **(Table 2 and 3)**. Some of the maps in this report indicate where Tribal lands occur. Although waters on Indian lands are not assessed in this report, these waters are an integral part of the state's water resources. Some of the Indian Nations publish their own water quality assessment reports which should be read in conjunction with this report to understand water quality conditions across Arizona.

Hydrologic Flow and Climate-- Many of Arizona's streams are not perennial (do not contain water year round), but instead flow only part of the year (intermittent flow), or only in response to precipitation (ephemeral). An estimate of Arizona's water resources is provided in **Table 2**. A map of streams with perennial flow **(Figure 4)** was created based on riparian area research by the Arizona Game and Fish Department (AGFD 1993 and 1997). This map illustrates generalized conditions but more research is needed in most watersheds to accurately depict hydrologic flow conditions.

The ephemeral and intermittent nature of Arizona's streams is largely due to climatic conditions, particularly precipitation and temperature **(Figure 5 and 6)**. However, ground water pumping, diversions into canals, and the creation of reservoirs has also had a significant influence on the amount of water in Arizona's streams.

Stream Flow Classification

Perennial: Flows continuously throughout the year.

Intermittent: Flows continuously only at certain times of the year, as when it receives water from a spring or from another surface source such as melting snow (i.e., seasonal).

Ephemeral: Channel is at all times above the water tables, and flows only in direct response to precipitation.

Table 3. An Estimate of Arizona's Water Resources

WATERSHED NAME	STREAMS (miles)						LAKES (acres)				Ground water ESTIMATED* STORAGE (acre-feet)
	Non-Indian Land			Indian Land			Non-Indian Land		Indian Land		
	Perennial	Intermittent	Ephemeral	Perennial	Intermittent	Ephemeral	Perennial	Non-perennial	Perennial	Non-perennial	
Bill Williams	185	655	5035	0	0	0	1,832	11,950	0	0	32,500,000
Colorado-Grand Canyon	480	260	14,870	125	5	3,740	68,398	13,412	389	0	509,500,000
Colorado-Lower Gila	375	145	13,545	75	0	535	36,866	0	244	0	272,300,000
Little Colorado-San Juan	640	1,655	9,635	305	170	15,310	16,051	6,831	5,295	118	413,000,000
Middle Gila	165	1,210	5,460	0	10	1,105	10,318	55,746	240	0	222,410,000
Salt	510	1,190	2,785	825	0	4,275	25,544	0	1,858	0	***
San Pedro-Willcox-Yaqui	195	665	6,610	0	0	6,395	1,319	29,471	0	0	112,000,000
Santa Cruz-Magdalena-Sonoyta	85	500	7,245	0	20	35	1,366	0	926	0	176,900,00**
Upper Gila	445	970	6,305	105	50	3,795	2,289	0	9,523	11,119	86,300,000**
Verde	450	2,115	5,990	15	5	230	4,603	3,636	6	0	29,550,000
STATE TOTAL	3,530	9,365	77,480	1,450	260	35,420	168,586	121,046	18,481	11,237	***
	Total on Non-Indian 90,375			Total on Indian 37,130			Total on Non-Indian 289,632		Total on Indian 29,718		
	Total miles in Arizona 127,505						Total acres in Arizona 319,350				

Stream miles and lake acres are based on USGS digitized hydrology at 1:100,000, and have been rounded to the nearest five miles. Reservoir acres along the Colorado River include only the acres within Arizona. Waters include manmade reservoirs and ponds of any size. Ground water estimates of supply come primarily from Arizona Department of Water Resources, with some estimates from US Geological Survey.

Non-perennial lake acres include ephemeral lakes, playas, and storm water retention areas that have been specifically named as a surface water in Arizona's surface water quality standards.

* Estimates to 1200 feet below ground surface (acre-feet).
** Indicates that no estimate is available for one or more ground water basins in the watershed.
*** Indicates insufficient data to make an estimate.

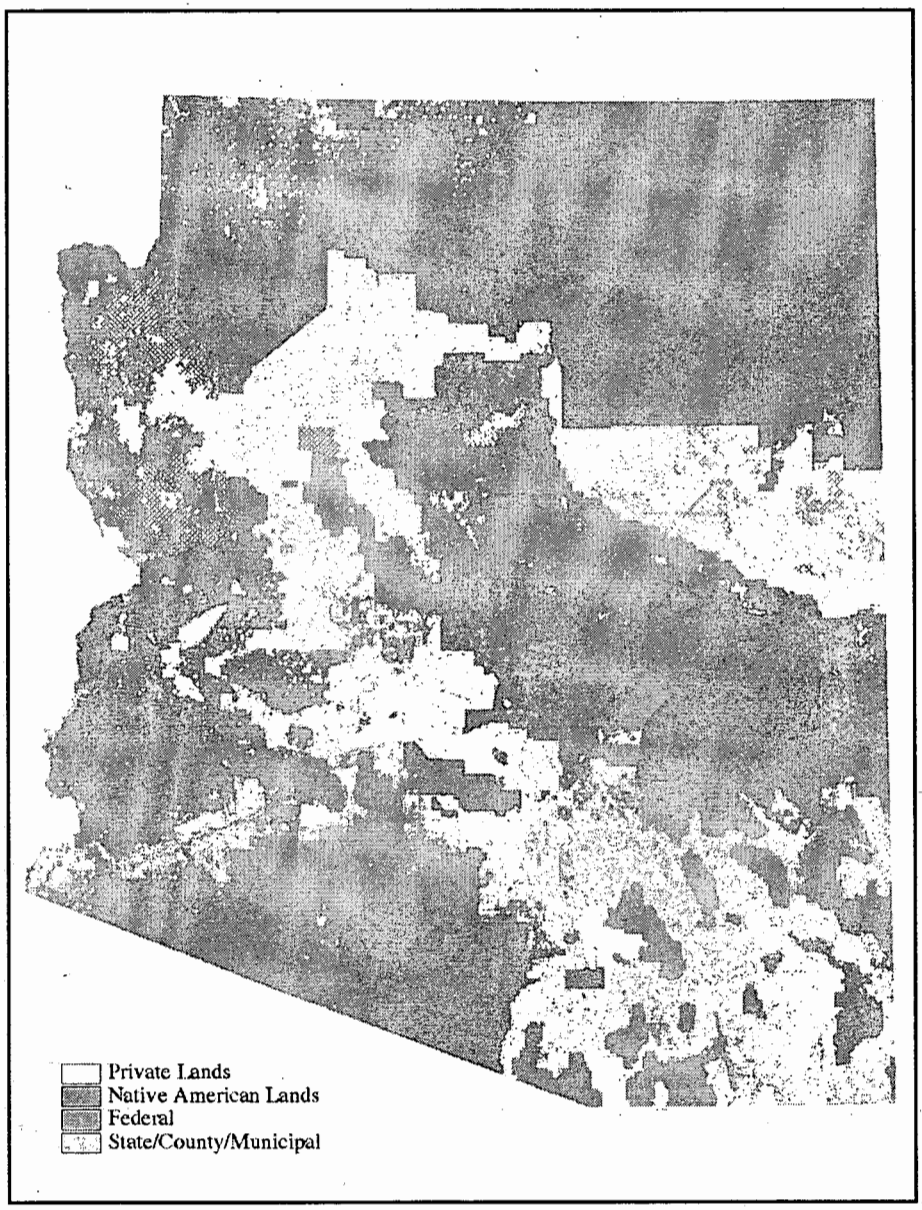


Figure 3. Land Ownership Categories in Arizona

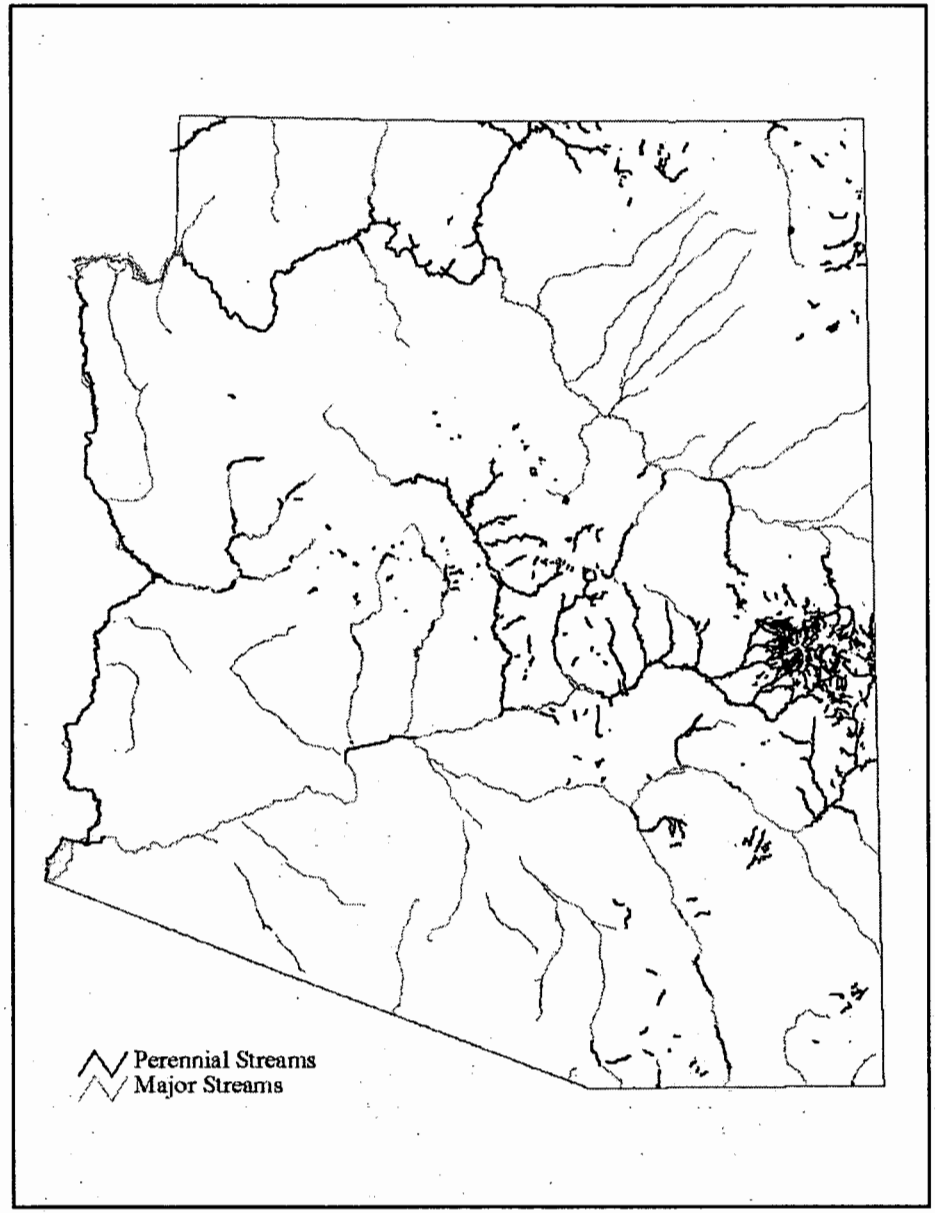


Figure 4. Perennial Streams in Arizona

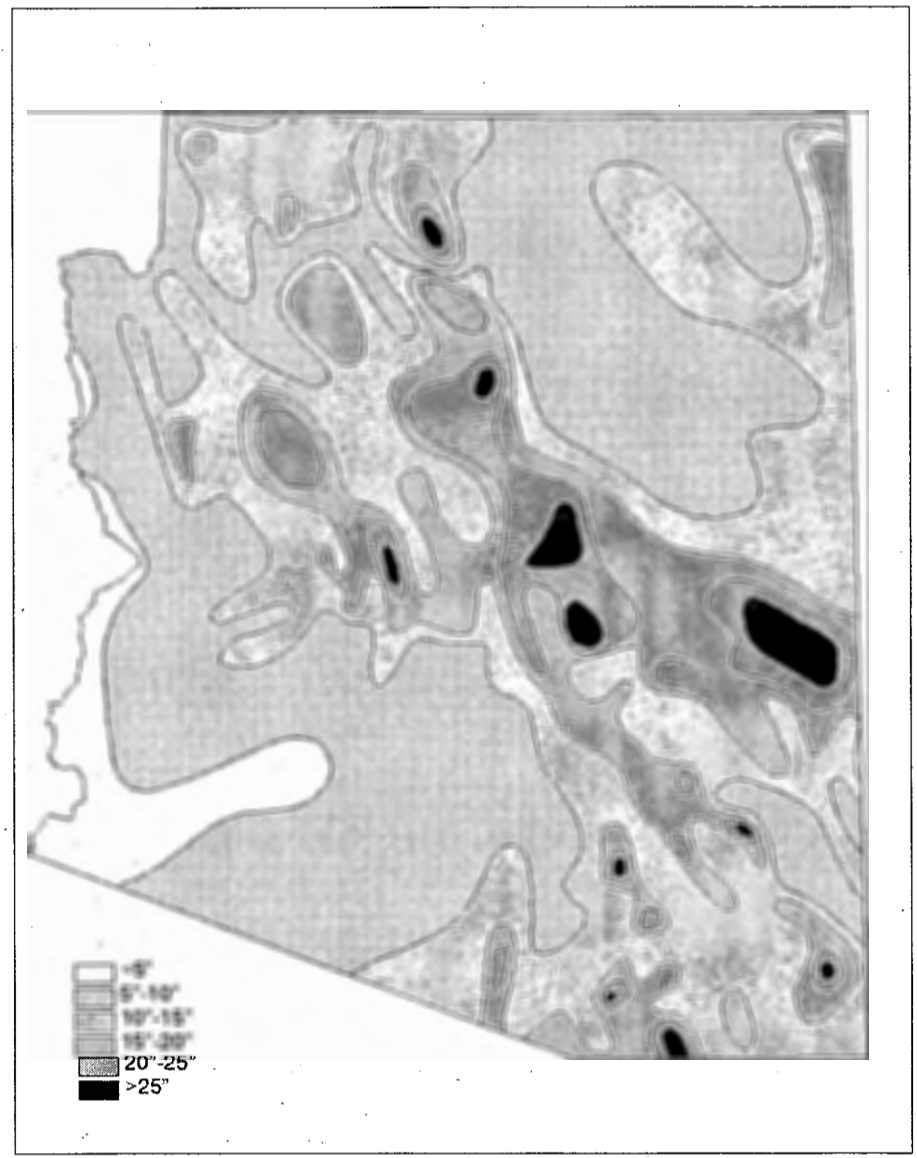


Figure 5. Mean Annual Precipitation Distribution in Arizona

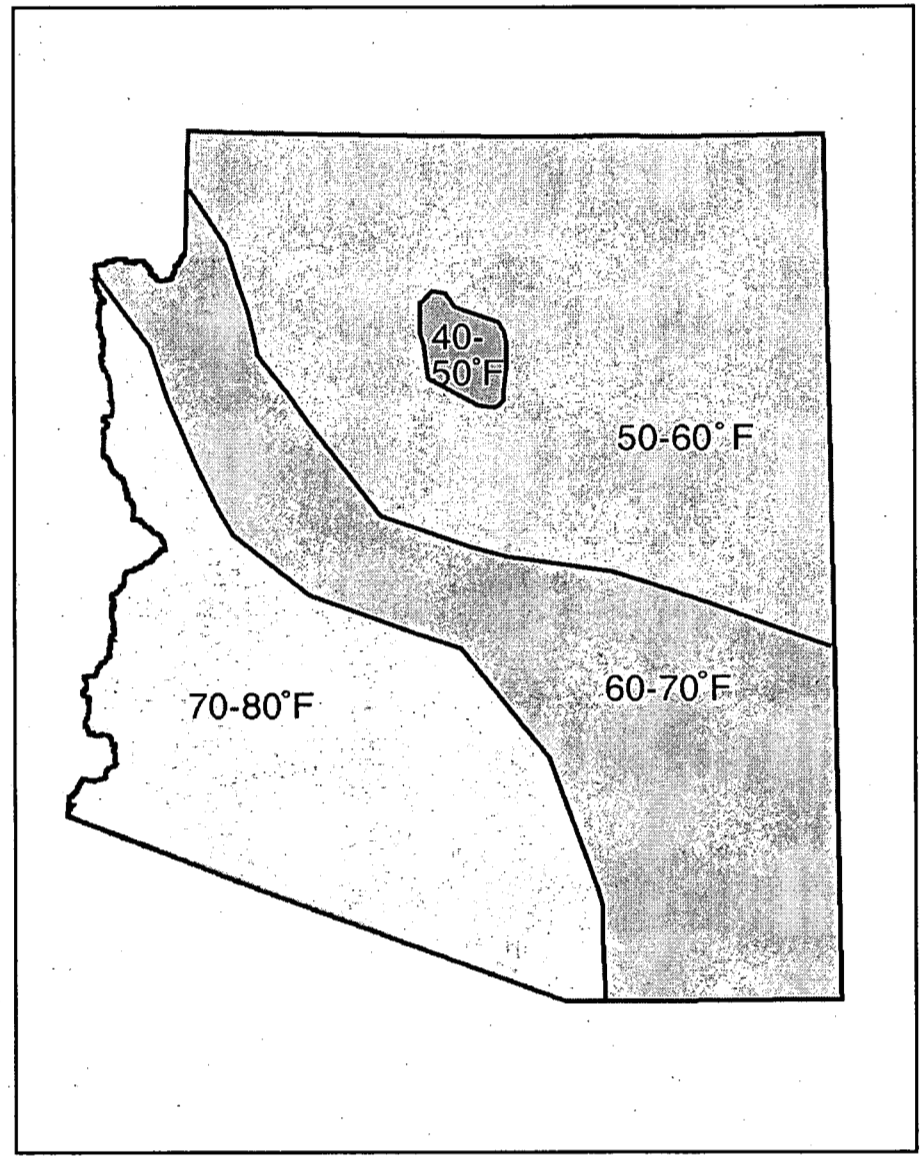


Figure 6. Mean Annual Temperature Distribution in Arizona

Watersheds, hydrologic unit areas, and basins

To manage water quality and quantity concerns, this large and diverse state has been subdivided into surface water hydrologic unit areas, basins, watersheds, ground water basins, and Active Management Areas. These areas are delineated hydrologically rather than politically (e.g., counties, cities, ownership), because water quality and quantity concerns are largely determined by drainage and hydrological flows. Water quality issues do not end at a political boundary.

- **Hydrologic unit areas** – The U.S. Geological Survey divided and subdivided the United States into drainage areas or surface water hydrologic units. Each drainage area was assigned a unique code number, an eight digit Hydrologic Unit Code (HUC) **(Figure 7 and Table 4)**.

> **A HUC divided** -- One HUC (15060106) was divided at Granite Reef Dam because diverting all of the surface water flow from the Salt River into canals makes the western half of this HUC more closely hydrologically interconnected with the Middle Gila Basin than the Salt River Basin.

- **Surface water basins** -- ADEQ grouped the 84 HUCs in Arizona into 13 Surface Water Basins **(Figure 8)** based on hydrologic relationships defined by the HUC numbering system. These surface water basins are used to organize surface waters in Arizona's surface water standards.

- **Watersheds** -- ADEQ also used the HUCs to organize the state into 10 Watersheds **(Figure 9)**. These watersheds were developed to synchronize ADEQ activities within a geographic area such as focused monitoring and surface water permit issuance, and to foster local stakeholder interest and involvement in water quality concerns (see discussion in Chapter III and Volume II). As shown by comparing **Figure 8 and Figure 9,** most Watersheds and Surface Water Basins are similar; however, three watersheds were created by combining basins and one basin (the Colorado River) was split into two watersheds. These new delineations were made to facilitate watershed management group meetings, and considered probable shared water quality concerns, shared land uses, and geographical proximity.

  Assessment information throughout this report is organized by watershed to facilitate stakeholder involvement in water quality concerns. However, specific water quality improvement efforts are generally addressed at a smaller drainage or sub-watershed scale.

- **Ground water basins and Active Management Areas** -- ADEQ adopted the ground water basins and Active Management Areas created by the Arizona Department of Water Resources to manage ground water quantity and quality concerns. The delineation of ground water areas was based on physiography, surface drainage patterns, subsurface geology, and aquifer characteristics. These basins do not delineate aquifers in Arizona. Because surface water drainage patterns were considered in delineating ground water basins, most basins fit inside a watershed **(Figure 10).**

  Some ground water quality studies and most remedial actions are conducted in a smaller area such as an aquifer or a sub-basin based on sources of contamination.

> **Three Levels of Ground Water Management**
>
> The Arizona Ground Water Management Code administered by the Arizona Department of Water Resources establishes that ground water basins may be classified under two special levels of water quantity management:
> **The Active Management Areas** (AMAs) -- Four ground water basins have been designated as AMAs due to severe overdraft of ground water. The goal in these areas is to achieve "safe-yield" by 2025. The availability of non-ground water supplies to support future growth is an important issue in these areas although ground water will continue to be a necessary part of the water supply.
> **Irrigation Non-Expansion Areas** (INAs) – Irrigation is restricted within these ground water basins.
> **Regional Water Supply Agencies** – These are replenishment districts that are expected to acquire and facilitate delivery of water supplies to reduce ground water overdraft and replenish aquifers.

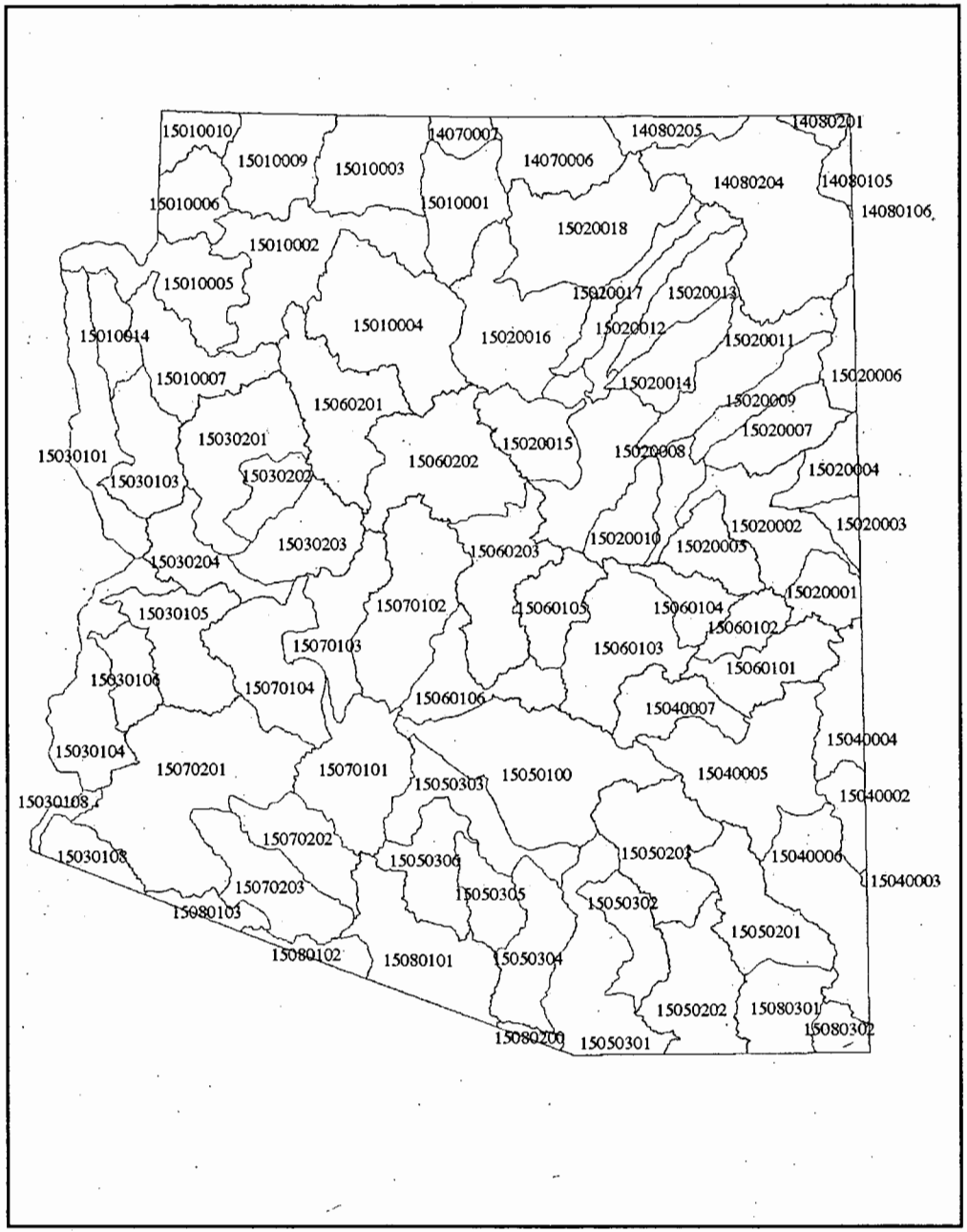


Figure 7. Hydrologic Unit Code (HUCs) Areas in Arizona

Names for the Eight-Digit Hydrologic Unit Code (HUC) Drainage Areas (for Figure 7)

HUC	NAME	WATER	HUC	NAME	WATER	HUC	NAME	WATER	HUC	NAME	W
15030201	Big Sandy	BW	15030108	Colorado (Yuma-Mexico)	CLG	15020014	Jadito Wash	LCR/SJ	15080101	San Simon Wash	SC/RIOS
15030202	Burro Creek	BW	15070201	Lower Gila	CLG	15020015	Diablo Canyon	LCR/SJ	15080102	Sonoyta Valley	SC/RIOS
15030203	Santa Maria River	BW	15070202	Tenmile Wash	CLG	15020016	Moenkopi Wash	LCR/SJ	15080103	Quitobaquito	SC/RIOS
15030204	Alamo Lake-Bill Williams	BW	15070203	San Cristobal	CLG	15020017	Dinnebito Wash	LCR/SJ	15080200	Rio Magdalena	SC/RIOS
14070006	Lake Powell	CGC	14080105	Chaco River	LCR/SJ	15050100	Gila (Coolidge Dam-Salt River)	MG	15050201	Willcox Playa	SP/WP/RY
14070007	Paria River	CGC	14080106	Sansotee Wash	LCR/SJ	15060106B	Salt (below Granite Reef Dam)	MG	15050202	Upper San Pedro	SP/WP/RY
15010001	Marble Canyon	CGC	14080201	San Juan	LCR/SJ	15070101	Gila (Salt River-Painted Rocks Dam)	MG	15050203	Lower San Pedro	SP/WP/RY
15010002	Grand Canyon	CGC	14080204	Chinle Valley	LCR/SJ	15070102	Agua Fria River	MG	15080301	Whitewater Draw	SP/WP/RY
15010003	Kanab Creek	CGC	14080205	Monument Valley	LCR/SJ	15070103	Hassayampa River	MG	15080302	Blackwater Draw	SP/WP/RY
15010004	Havasu Canyon	CGC	15020001	Upper Little Colorado (LCR)	LCR/SJ	15070104	Centennial Wash	MG	15040002	Upper Gila	UG
15010005	Lake Mead	CGC	15020002	LCR (Lyman-Puerco)	LCR/SJ	15060101	Black River	SALT	15040003	Arimas Valley	UG
15010006	Grand Wash	CGC	15020003	Carrizo Wash	LCR/SJ	15060102	White River	SALT	15040004	San Francisco River	UG
15010007	Truxton Wash	CGC	15020004	Zuni River	LCR/SJ	15060103	Roosevelt Lake	SALT	15040005	Gila Valley	UG
15010009	Fort Pierce Wash	CGC	15020005	Silver Creek	LCR/SJ	15060104	Carrizo Creek	SALT	15040006	San Simon Creek	UG
15010010	Virgin River	CGC	15020006	Upper Puerco River	LCR/SJ	15060105	Tonto Creek	SALT	15040007	San Carlos River	UG
15010014	Detrital Wash	CGC	15020007	Lower Puerco River	LCR/SJ	15060106A	Salt River (Roosevelt-Granite Reef)	SALT	15060201	Chino Valley	VD
15030101	Colorado (Hoover-Parker Dam)	CLG	15020008	LCR (Puerco-Dinnebito)	LCR/SJ	15050301	Upper Santa Cruz	SC/RIOS	15060202	Verde Valley	VD
15030103	Sacramento Wash	CLG	15020009	Leroux Wash	LCR/SJ	15050302	Pantano Wash	SC/RIOS	15060203	Lower Verde River	VD
15030104	Colorado (Parker-Imperial Dam)	CLG	15020010	Chevelon Canyon	LCR/SJ	15050303	Lower Santa Cruz	SC/RIOS			
15030105	Bouse Wash	CLG	15020011	Pueblo Colorado	LCR/SJ	15050304	Altar and Avra Valleys	SC/RIOS			
15030106	Tyson Wash	CLG	15020012	Orabi Wash	LCR/SJ	15050305	Aquirre Valley	SC/RIOS			
15030107	Colorado (Imperial-Yuma)	CLG	15020013	Polacca Wash	LCR/SJ	15050306	Santa Rosa Wash	SC/RIOS			

WATER = Watersheds; BW = Bill Williams, CGC = Colorado Grand Canyon, CLG = Colorado-Lower Gila, LCR/SJ = Little Colorado-San Juan, MG = Middle Gila, SALT = Salt, SC/RIOS = Santa Cruz-Rio Magdalena-Rio Sonoyta, SP/WP/RY = San Pedro-Willcox Playa-Rio Yaqui, UG = Upper Gila, VD = Verde

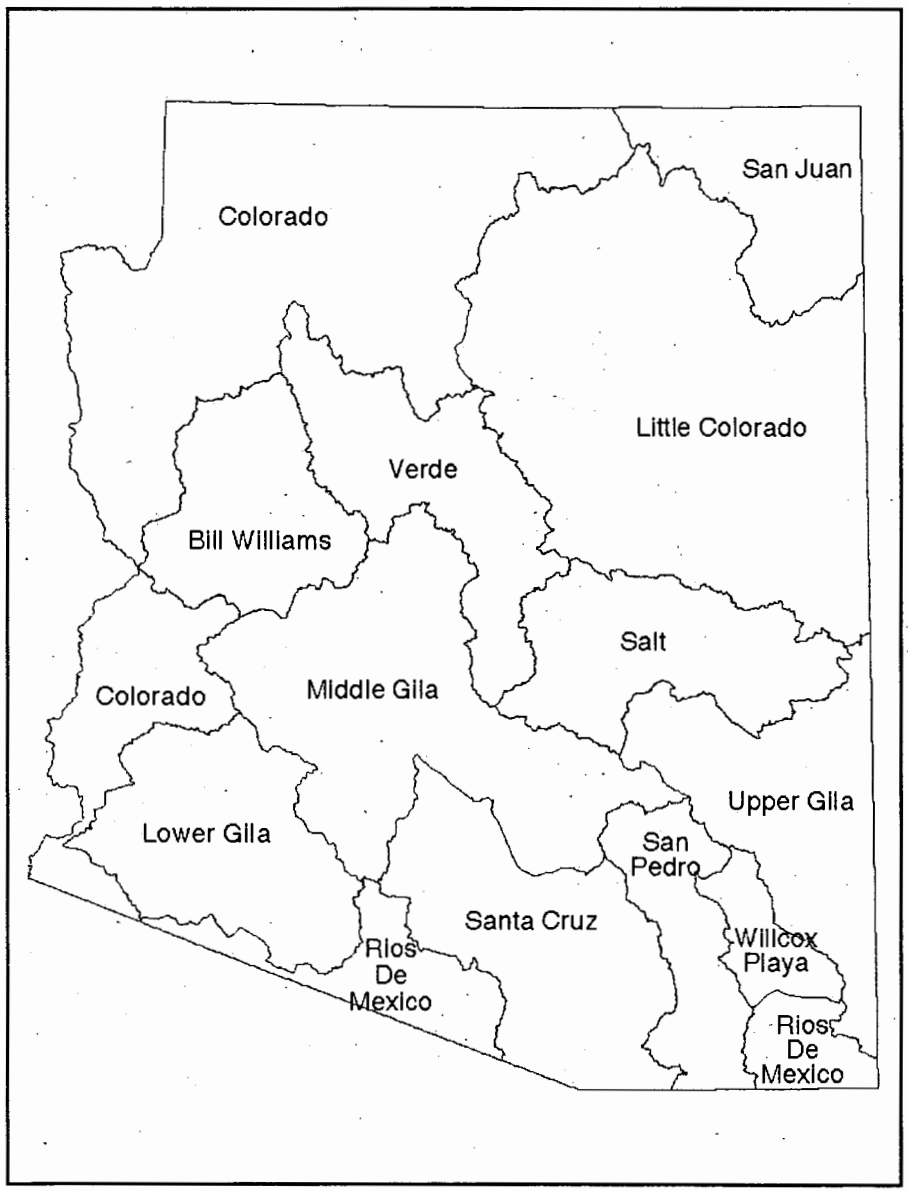


Figure 8. Arizona's Surface Water Basins

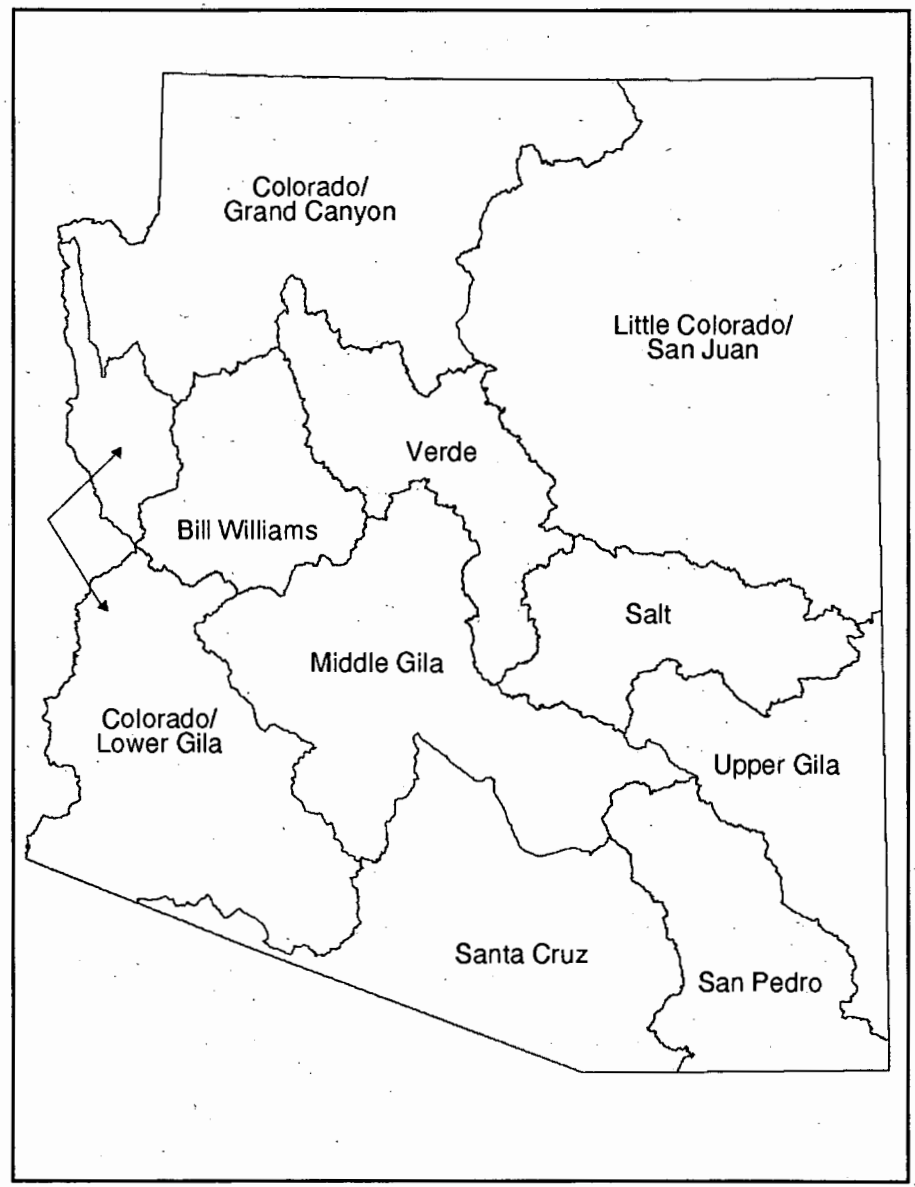
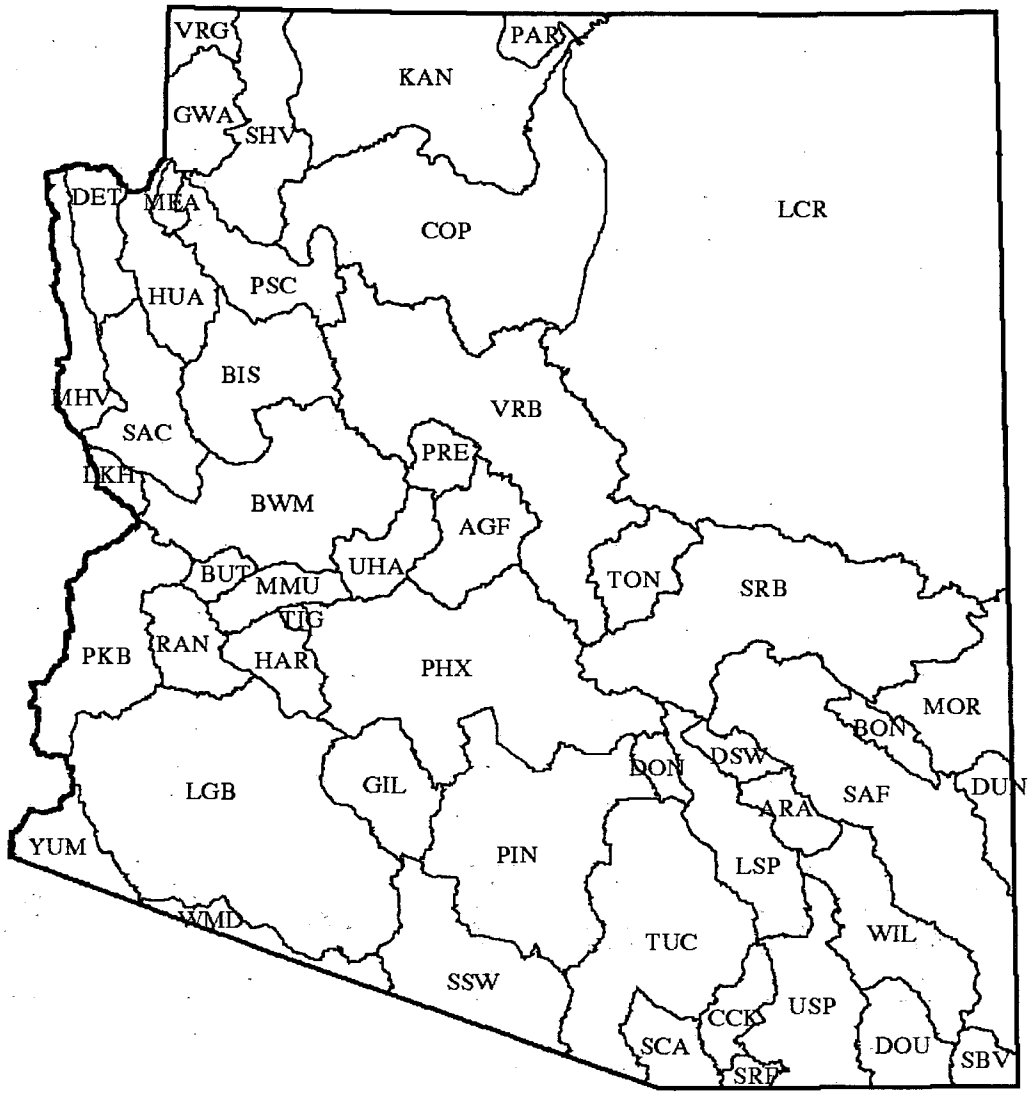


Figure 9. Arizona's Watersheds



Map Code	Basin Name
AGF	Agua Fria
ARA	Aravaipa Canyon
BIS	Big Sandy
BON	Bonita Creek
BUT	Butler Valley
BWM	Bill Williams
CCK	Cienega Creek
COP	Coconino Plateau
DET	Detrital Valley
DON	Dornelly Wash
DOU	Douglas
DSW	Dripping Springs Wash
DUN	Duncan Valley
GIL	Gila Bend
GWA	Grand Wash Basin
HAR	Harquahala
HUA	Hualapai Valley
KAN	Kanab Plateau
LCR	Little Colorado River
LGB	Lower Gila
LKH	Lake Havasu
LSP	Lower San Pedro
MEA	Meadview
MHV	Lake Mohave
MMU	McMullen Valley
MOR	Morenci

Map Code	Basin Name
PAR	Paria
PHX	Phoenix AMA
PIN	Pinal AMA
PKB	Parker
PRE	Prescott AMA
PSC	Peach Springs
RAN	Ranegras Plain
SAC	Sacramento Valley
SAF	Safford
SCA	Santa Cruz AMA
SBV	San Bernadino Valley
SHV	Shivwits Plateau Basin
SRB	Salt River
SRF	San Rafael
SSW	San Simon Wash
TIG	Tiger Wash
TON	Tonto Creek
TUC	Tucson AMA
UHA	Upper Hassayampa
USP	Upper San Pedro
VRB	Verde River
VRG	Virgin River Basin
WIL	Willcox
WMD	West Mexican Drainage
YUM	Yuma

Groundwater Basin
State of Arizona Boundary

Figure 10. Ground Water Basins in Arizona

III. How are Water Quality Assessments Performed?

The assessment process

A surface water is assessed based on all readily available, credible, and scientifically defensible monitoring data and information pertaining to possible numeric and narrative standards violations. Each designated use is assessed, and these assessments are combined to provide an overall water quality assessment and to determine whether the Department needs to take further actions.

In assessing surface water quality there is always a risk of concluding that a surface water is impaired when it is not, or concluding that a surface water is attaining its uses when it is actually impaired. Either of these errors involves a cost. Concluding that a surface water is impaired when it is not results in a use of resources that should be utilized elsewhere. Concluding that a surface water is not impaired when it actually is allows environmental degradation and human health threats to persist. The *Impaired Water Identification* rule (A.A.C. R18-11-601 through 606) was developed to reduce both of these errors by providing a comprehensive and statistically sound method for listing a surface water.

The rest of this section describes the details of the assessment process.

Data Conflicts and Weight-of-evidence Assessments – The assessment process considers multiple environmental indicators. Each type of data (e.g., biological, toxicological, physical, and chemical) provides its own insights into the integrity and health of an aquatic system and the ability of the public to safely recreate in or use such waters. Each type of data also has different strengths and limitations. For example, chemical water samples generally evaluate and predict impacts from single pollutants, but do not capture the combined interactions of pollutants or cumulative impacts over time. Some chemicals may be found in high levels in fish tissue or sediments while available laboratory methods cannot detect their presence in the water column.

To make an assessment, apparent data conflicts must be resolved. Arizona uses a "weight-of-evidence" approach in completing assessments. The strengths and limitations of each data set are considered, looking at all of the data and exceedances in context with relevant information such as soil type, geology, hydrology, flow regime, geomorphology, natural processes, potential anthropogenic influences, characteristics of the stressors, age of the data, monitoring techniques, sampling plan, and climate.

Although multiple lines of evidence are desirable, only one line of water quality evidence may be sufficient to demonstrate that the surface water or segment is impaired or not attaining its uses.

Data or information collected during critical conditions may be considered separately from the complete dataset. A surface water may be impaired only during critical conditions such as high or low stream flow, weather conditions, or anthropogenic activities in the watershed, even though it is attaining standards during all other conditions.

Data Collection and Review – For this assessment, ADEQ reviewed all readily available surface water quality data collected during the five-year period beginning January 1998 through December 2002. Data were requested from all federal and state agencies who routinely collect water quality data, including water chemistry, sediment contamination, bioassessments, fish tissue, fish kills, weed harvesting, and physical habitat information. EPA's STORET database was queried. (STORET is EPA's storage and retrieval system for housing surface water data from federal and state agencies.) The assessment team also made an effort to track down all surface water quality data collected through permit compliance, remediation, and enforcement programs within this agency, from universities, and from volunteer monitoring programs.

Data Quality Assurance -- Data used in assessment and listing must be evaluated to determine whether they meets the credible data requirements outlined in the *Impaired Water Identification* rule (A.A.C. R18-11-602). To assure that the data is credible and relevant, all water quality data are collected using a suitable Quality Assurance Plan (QAP) and site-specific Sampling and Analysis Plan (SAP) or equivalent planning documents. Chemical and toxicological samples must be analyzed in a state-licensed laboratory, federal laboratory, or other laboratory that can demonstrate procedures that are substantially equal to those required by the

QAPs and SAPs

A **Quality Assurance Plan** details how environmental data collection and analyses are planned, implemented, and assessed for quality during the monitoring project.

A **Sampling and Analysis Plan** describes where, why, and how samples are to be collected to ensure that data quality objectives are met and that samples are spatially and temporally representative of surface water conditions.

Arizona Department of Health Services and use methods identified in A.A.C R9-14-610 or 40 CFR Part 136.

These requirements apply to all data used in this assessment. Quality Assurance Plans (QAP) and Sampling and Analysis Plans (SAP) must specify the use of accepted field and laboratory methods by adequately trained staff. ADEQ has QAPs and associated SAPs for each of its monitoring programs that are available for reference by other monitoring entities and the public.

Adequate training of field and laboratory personnel is essential. ADEQ, in conjunction with Arizona Department of Health Services and Gateway Community College, provides classes in field monitoring techniques. Several other community colleges and universities also offer classes in environmental sampling techniques.

The data are reviewed for accuracy and to determine whether all data points are valid. Questionable data are flagged and eliminated from the assessment process unless they can be validated.

Some data were included in the monitoring tables that did not meet the credible data requirements. As noted in the tables, these data were not used for the final assessments, but have been included as reference information.

Data Tracking -- Surface and ground water data are stored in ADEQ's Water Quality Database and uploaded to the federal STORET database. Data uploaded to the STORET database can be queried on the internet at: http://www.epa.gov/STORET. ADEQ's Oracle based system is the repository of all water chemistry data collected by ADEQ and by other monitoring entities under contract by ADEQ. Eventually, all water quality data used in assessments will be stored in this database.

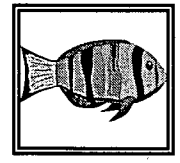
The groundwater portion of the database provides a comprehensive repository for well location information, well construction details, field measurement data (e.g., aquifer water levels), field observations (e.g., borehole geology), and water quality sampling results. The surface water portion stores sampling site information, field observations and measurements, and water quality sampling results. Further information concerning the Oracle database can be obtained by calling Wayne Hood, Data Management and Analysis Section Manager at (602) 771-4427.

Do all waters have to meet the same standards?

Standards and Designated Uses -- Arizona sets narrative and numeric surface water standards for water quality based on the uses people and wildlife make of the water. These "designated uses" are specified in the standards for individual surface waters, or if the surface water is not listed in the rule, the designated uses are determined by the tributary rule. Surface waters have multiple designated uses, while aquifers are protected for drinking water use, unless specifically reclassified. Water quality is judged acceptable or impaired based on standards established to protect each designated use.

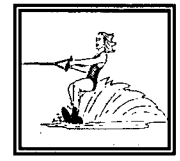
Designated Use Classification -- Six groups of designated uses can be applied to surface waters. All bodies of water regulated by these standards (except canals) are protected for aquatic and wildlife uses and recreation in or on the water (either Full Body and Fish Consumption or Partial Body Contact).

- **Aquatic and Wildlife**. Four categories of aquatic and wildlife protection have been established. All surface waters, except canals, have one of these:
  - Warmwater aquatic community (A&Ww),
  - Coldwater aquatic community (A&Wc),
  - Effluent dependent water (A&Wedw),
  - Ephemeral flow (A&We).

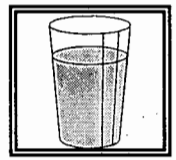
  Aquatic and Wildlife criteria (except for A&W ephemeral) are also divided into acute criteria (established based on short exposures) and chronic criteria (established based on long-term or life-time exposures.)

- **Full Body Contact** (FBC) or **Partial Body Contact** (PBC) criteria were established to maintain and protect water quality for activities such as swimming, water skiing, boating, and wading. The FBC criteria are to protect public health when people engage in full immersion in the water and potential ingestion. The PBC criteria are to protect people who engage in water-based recreation where full immersion and ingestion of the water are unlikely (wading, fishing, boating).

- **Fish Consumption** (FC) water quality criteria were established to protect human health from pollutants which may bioaccumulate in aquatic organisms (e.g., fish, turtles, crayfish) and be consumed by people.

- **Domestic Water Source** (DWS) criteria are applied to surface water that is used as a raw water source for drinking water supply. The criteria were developed assuming that conventional water treatment (disinfection and filtration) would be needed to yield water suitable for human consumption.



- **Agriculture Irrigation** (AgI) criteria were established to protect water used for irrigating crops.

- **Agriculture Livestock Watering** (AgL) criteria were established to safeguard water used for consumption by livestock.

Narrative Standards -- Narrative surface water standards (A.A.C. R18-11-108) were established to protect water quality when a numeric standard is not available or is insufficient **(Appendix C)**. The new state TMDL statute requires development of narrative implementation procedures before narrative standards can be applied to 303(d) listing decisions. Several of these documents are under development but were not available for this assessment.

How do the new standards adopted in 2002 affect this assessment?

Surface water standards are reviewed and revised on a three-year cycle. These standards are established in Arizona Administrative Code (A.A.C.) R18-11-101 through R18-11-123 plus appendices. Ground water standards (A.A.C. R18-11-401 through R18-11-506) are revised as new drinking water protection standards are adopted.

ADEQ adopted new surface water standards in 2002. These standards did not go into effect until after completion of the 2002 assessment, so this assessment is the first to use these new standards. The surface and ground water quality standards used in this assessment are included in **Appendix C**. Some of the major changes that affected the assessment of Arizona's surface waters are described below.

Turbidity and the New SSC Standard – ADEQ repealed the turbidity standard in 2002 and adopted a suspended sediment concentration (SSC) standard of 80 mg/L, expressed as a geometric mean based on a four sample minimum, to protect Aquatic and Wildlife designated uses. SSC is only applicable to samples collected at or near base flow, which the U.S. Geological Survey (USGS) defines as "flow sustained largely by ground water discharge."

As established in Arizona's *Impaired Water Identification* rule (Appendix B), more than one exceedance of the this geometric mean standard would result in an assessment of "impaired." One exceedance would be assessed as "inconclusive." As lakes do not have flow, SSC is not applicable in lakes. ADEQ is currently developing a narrative standard to address sedimentation in lakes.

ADEQ has encountered several obstacles in assessing SSC for this report. Since the standard was recently adopted in 2002, few monitoring sites had the prerequisite four samples needed for the geometric mean. Even fewer sites were located at a gage station, which seems necessary to provide the flow data needed to determine base flow. In the end, only 10 USGS sites had sufficient data at a gage site. However, much of this USGS data targeted storm events, which would not represent base flow. Also, many of these sites were located below dams, which might not represent base flow for the stream. But the single biggest problem with assessing SSC was that ADEQ has not yet determined a scientifically based method of calculating base flow.

Recognizing various implementation issues, ADEQ has committed to reviewing the numeric SSC standard in the next triennial review (circa 2005). ADEQ will re-evaluate the most current scientific literature addressing adverse effects on aquatic life caused by excessive suspended sediment. ADEQ will also continue collecting turbidity, suspended sediment concentration, and total suspended solids data at all monitoring sites as part of its routine monitoring program to try to establish correlations between the parameters.

In the meantime, for the 2004 assessment, ADEQ has done the following to identify potential suspended sediment problems in streams and lakes:

- Turbidity data have been included and assessed under the former standard. Assessments of "inconclusive" and "attaining" based on

turbidity were made by the same methods that were used in the last assessment (see "Assessment of Each Designated Use" later in this chapter for assessment criteria for "attaining," "impaired," "inconclusive," and "not attaining"). The following waters were assessed as "not attaining" for turbidity and placed in a subcategory of Category 4 waters (4D):

- Waters on the 2002 303(d) List for turbidity (unless sufficient data to assess as "attaining");
  - Waters with new data that indicate impairment under the former standard; and
  - Waters with less than 20 sample, but more than 5 turbidity exceedances, that EPA would have placed on the 303(d) List.

- Waters for which a turbidity TMDL had been approved by EPA were assessed as "not attaining" and placed in the subcategory of Category 4 waters (4A).

- All of the SSC data were screened, and any site with at least 4 samples and all or a portion of the data might exceed the geometric mean standard of 80 mg/L were identified. Since ADEQ does not yet have a method to determine base flow, all data were included and assessed without regard to flow. These 10 USGS sites have "potential impairment" and were assessed as "inconclusive" and placed on the Planning List. This was done to flag these waters for further study.

- ADEQ has included a table of the lakes and streams potentially impaired due to sediment in Chapter VI, along with a map showing their location in the state. This table includes those waters assessed as "not attaining" due to turbidity (4D), and those assessed as "inconclusive" due to suspended sediment concentration. These are the lakes and streams that will have high priority for further suspended sediment studies.

Despite these assessment problems, EPA is developing methods to establish base flow. This may result in many or all of the reaches identified as having "potential impairment" due to suspended sediment concentration being added to the 2004 303(d) List by EPA. EPA may also declare that all of the surface waters in the category 4D due to turbidity are violating narrative standards, and therefore, EPA may add all of those waters to the 2004 303(d) List.

***Escherichia Coli* and Fecal Coliform Standards** – *Escherichia coli* standards were established for waters with Partial Body Contact. As most surface waters in Arizona have either Partial Body or Full Body Contact uses (with the exception of metropolitan area canals), Arizona dropped the fecal coliform standards for other designated uses, such as Domestic Water Source, Aquatic and Wildlife, Agricultural Irrigation and Agricultural Livestock Watering.

The new *Escherichia coli* standards were lowered for the single sample maximum for Full Body Contact from 580 colony forming units per 100 milliliters (CFU/100 ml) down to 235 CFU/100 ml. This reduction in the standard resulted in several more waters being identified as "impaired."

The new standards also replaced the 30-day geometric mean (5-sample minimum), with a new geometric mean (4 sample minimum). The new standard can be applied to any consecutive 4 samples and is not limited to those collected within 30 days. However, because the *Impaired Water Identification* rule has not yet been revised to fit the new surface water standards, listing decisions for this assessment could only be based on a 30-day geometric mean. Therefore, for this assessment the geometric mean standard of 126 was applied only when there were sufficient samples to determine a geometric mean within a 30-day period.

Changes in Other Standards – A number of other standards were significantly changed by the adoption of the new standards in 2002. Among those, the following changes resulting in several additions or delistings to the 303(d) List or the Planning List:

- The beryllium standards for Fish Consumption changed from 0.21 µg/L to 1,130 µg/L;
- The fluoride standards to protect Full and Partial Body Contact changed from 8,400 µg/L to 84,000 µg/L;
- A new lead standard to protect Full and Partial Body Contact was established at 15 µg/L (no standard previously for these uses);
- The manganese standards to protect Full and Partial Body Contact changed from 19,600 µg/L to 196,000 µg/L.

Aquatic and Wildlife Use Designations -- ADEQ's Biocriteria Program determined that aquatic communities change from warmwater to coldwater communities consistently around the 5000-foot elevation throughout Arizona. Based on this research, streams listed in Arizona's Water Quality Standards that crossed this elevation were split from one reach into two: coldwater above the 5000-foot line (A&Wc) and warmwater (A&Ww) below. The reach numbers remained the same, with an "A" (coldwater) or "B" (warmwater) attached.

Tributary Rule -- Significant changes were also made in Arizona's tributary rule (A.A.C. R18-11-105). The tributary rule is used to assign designated uses to streams and lakes not listed in the surface water quality standards. The previous rule considered uses of the tributary as well as downstream uses. The new rule assigns an Aquatic and Wildlife use based on flow regime (perennial, intermittent, or ephemeral) and 5000-foot elevation (coldwater vs. warmwater). All perennial and intermittent streams are given the Fish Consumption and Full Body Contact uses, and all ephemeral streams are assigned the Partial Body Contact designated use.

The Agricultural Irrigation, Agricultural Livestock Watering, and Domestic Water Source uses no longer apply to tributaries not listed in rule.

Do some waters have special standards to meet?

Unique Waters Classification and Antidegradation Standards – A Unique Water is a surface water classified by ADEQ as an outstanding state resource water (as prescribed in A.A.C. R18-11-112). Twenty streams have been established as Unique Waters in Arizona **(Figure 11)**.

ADEQ may classify a surface water as a unique water through the rule making process if it meets one of the following criteria:

- The surface water is of exceptional recreational or ecological significance because of its unique attributes, including but not limited to attributes related to the geology, flora, fauna, water quality, aesthetic values, or wilderness characteristics of the surface water, or
- Threatened or endangered species are known to be associated with the surface water and existing water quality is essential to the maintenance and propagation of a threatened or endangered species, or the surface water provides critical habitat for a threatened or endangered species.

Public comments in support or opposition to a Unique Waters nomination are considered by the Department in making the decision on classifying a water as meeting one or both of these criteria.

Unique waters are given more stringent surface water quality protections than other surface waters under the state's antidegradation rule A.A.C. R18-11-107(D). Under antidegradation implementation procedures, activities that may result in a new or expanded discharge of pollutants to Unique Water (or its tributaries) are prohibited if the discharge would cause degradation of existing water quality. Discharges include those caused by land use activity (e.g., construction, mining, grazing, agriculture) as well as discharges requiring a surface water discharge permit (e.g., wastewater treatment plant discharge, adit, dredge and fill activity).

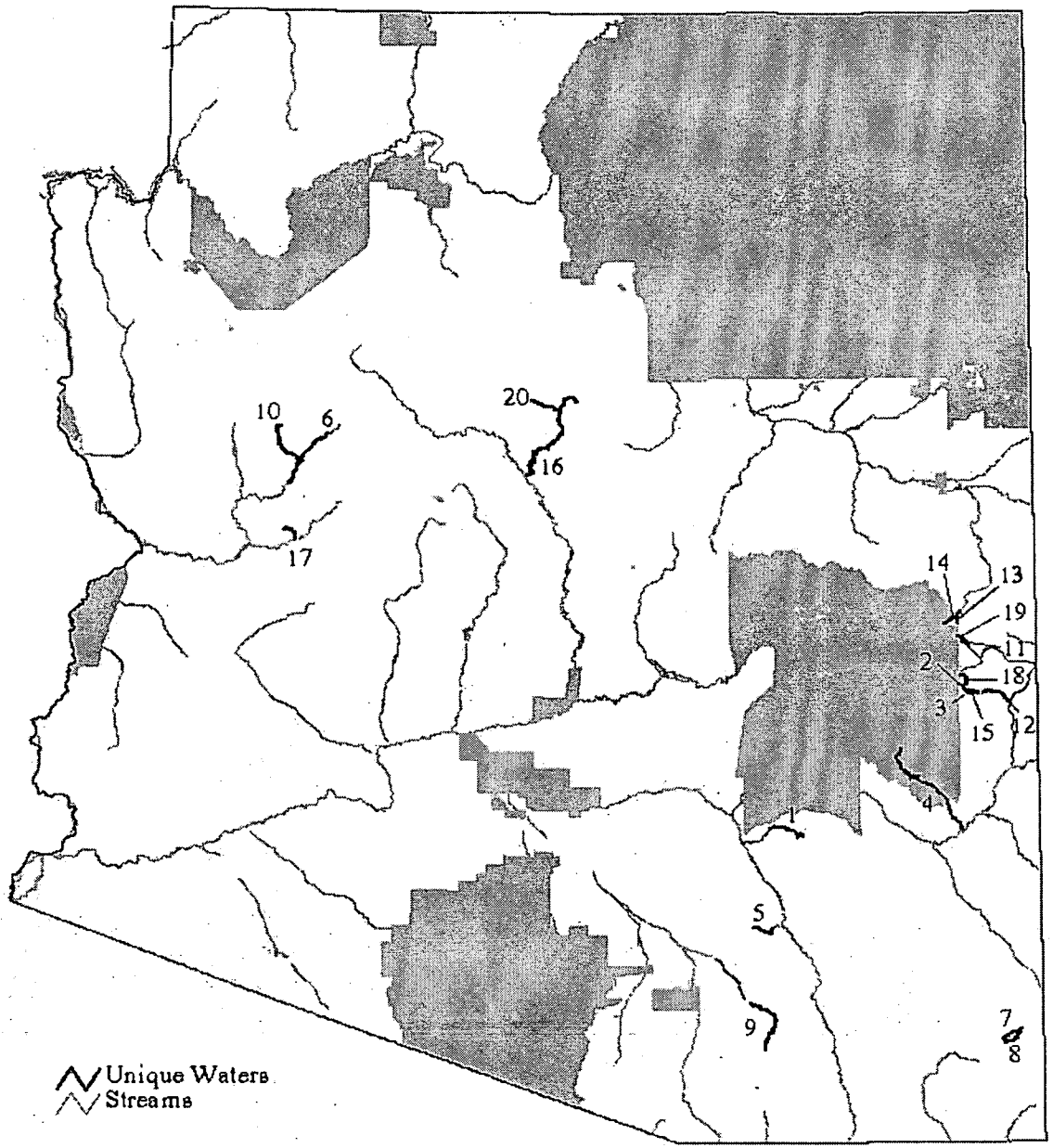
Additional, more stringent, numeric standards can be specified for Unique Waters. These site specific standards are listed in the surface water standards (A.A.C. R18-11-112).

Effluent Dependent Water – ADEQ classifies some waters as effluent dependent waters **(Figure 12)**. These surface waters would be ephemeral, except for the discharge of treated effluent. Designated uses are limited to Aquatic and Wildlife effluent dependent water, Partial Body Contact, and in some places Agriculture Livestock Watering.

Arizona has developed specific Aquatic and Wildlife effluent dependent water (A&Wedw) standards for bacteria, water temperature, dissolved oxygen, and acute and chronic toxic chemical criteria **(Appendix C)**. In general, these standards are less stringent than other Aquatic and Wildlife designated uses due to the limited species of aquatic life that these waters can support. The exception is *Escherichia coli*, which is more stringent because of the likelihood of pathogens in wastewater.

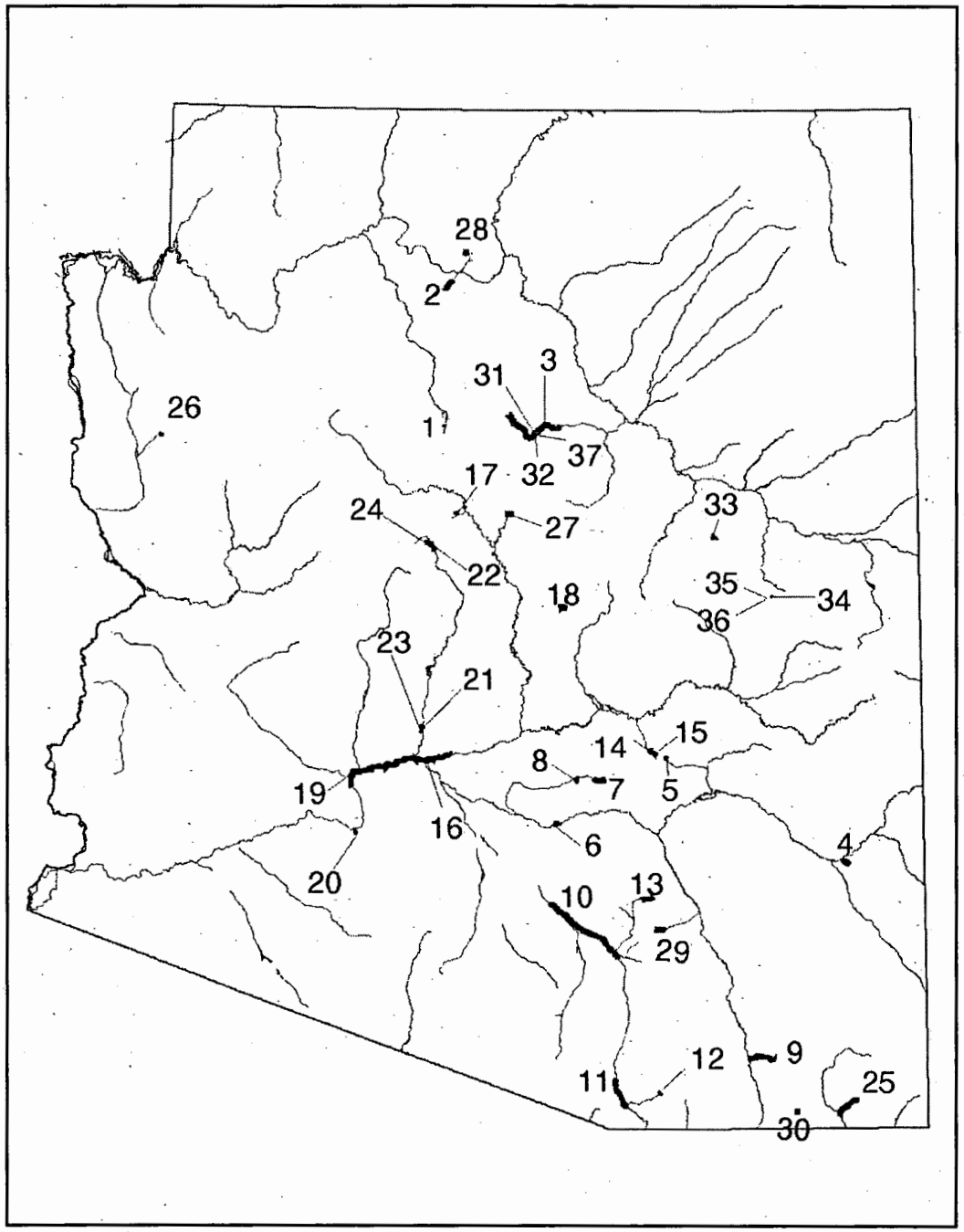
Moderating Provisions – Dischargers have the opportunity to establish a "mixing zone" or "variance" through the NPDES/AZPDES permit process. These moderating provisions provide an alternate standard for the surface water. A mixing zone is a prescribed area or volume of surface water where initial dilution of the discharge takes place. A mixing zone can only be established if there is adequate water for dilution; therefore it cannot be applied to an ephemeral drainage. ADEQ can also grant a pollutant specific variance for a point source discharge for up to five years where:

1. The permittee demonstrates that the treatment is more advanced than the technology-based effluent limitations needed to comply with the water quality standards, but
2. It is not technically feasible to achieve this level of treatment within the next five years, or the cost of such treatment would result in unacceptable social and economic impacts.
3. Human-caused conditions or sources of pollution prevent attainment of the water quality standard and cannot be remedied within the next five years.



#	Waterbody Name
1	Aravaipa Creek
2	Bear Wallow Creek
3	Bear Wallow Creek (South Fork)
4	Bonita Creek
5	Buehman Canyon
6	Burro Creek
7	Cave Creek
8	Cave Creek South Fork
9	Cienega Creek
10	Francis Creek
11	Hay Creek
12	K P Creek
13	Lee Valley Creek
14	Little Colorado River (West Fork)
15	North Fork Bear Wallow Creek
16	Oak Creek
17	People's Canyon Creek
18	Snake Creek
19	Stinky Creek
20	West Fork Oak Creek

Figure 11. Unique Waters in Arizona



(See surface water names on the following table)

Figure 12. Effluent Dependent Waters in Arizona

Effluent Dependent Waters in Arizona (for Figure 12)

Map #	Surface Water Name and Wastewater Treatment Plant (WWTP)	Map #	Surface Water Name and Wastewater Treatment Plant (WWTP)	Map #	Surface Water Name and Wastewater Treatment Plant (WWTP)
1	Cataract Creek below Williams WWTP to 1 km downstream	16	Salt River below Phoenix 23rd Avenue WWTP (Phoenix metro WWTPs) to Gila River	31	Lake Humphreys from Flagstaff WWTP
2	Bright Angel Wash below So Rim of Grand Canyon WWTP to Coconino Wash	17	Bitter Creek below Jerome WWTP to Indian Reservation	32	Whale Lake from Flagstaff WWTP
3	Rio de Flag below Flagstaff WWTP to San Francisco Wash	18	American Gulch below the No. Gila County WWTP to E. Verde River	33	Dry Lake from Stone Container WWTP
4	Bennett Wash below ADOC*-Safford WWTP to Gila River	19	Gila River below #16 to Gillespie Dam (Phoenix metro WWTPs)	34	Pintail Lake from Show Low WWTP
5	Unnamed wash below ADOC*-Globe WWTP to Indian Reservation	20	Unnamed wash from Gila Bend WWTP to Gila River	35	Telephone Lake from Show Low WWTP
6	Gila River below Florence WWTP to Felix Rd.	21	Agua Fria River below El Mirage WWTP to 2 km downstream	36	Ned Lake from Show Low WWTP
7	Queen Creek below Superior WWTP to Potts Canyon	22	Agua Fria River below Prescott Valley WWTP (#24)	37	Lower Walnut Canyon Lake from Flagstaff WWTP
8	Unnamed wash below Queen Valley WWTP to Queen Creek	23	Unnamed wash below Luke Air Force Base WWTP to Agua Fria River	38	Lake Cochise south of Twin Lakes Golf Course
9	Walnut Gulch below Tombstone WWTP to Tombstone Wash	24	Unnamed wash below Prescott Valley WWTP to Agua Fria River		
10	Santa Cruz River below Pima County Roger Rd. WWTP to Baumgartner Rd.	25	Unnamed wash to Whitewater Draw below Bisbee Airport WWTP)		
11	Santa Cruz River below Nogales International WWTP to Tubac bridge	26	Holy Moses Wash below Kingman WWTP to 3 km downstream		
12	Sonoita Creek below Patagonia WWTP to 750 ft. downstream	27	Jack's Canyon Wash below Big Park WWTP to Dry Beaver Creek		
13	Unnamed wash below Oracle WWTP to 5 km downstream	28	Transept Canyon below No. Rim Grand Canyon WWTP to 1 km downstream		
14	Pinal Creek below Globe WWTP (#15) to Radium	29	Unnamed tributary to Alder Wash below Mount Lemmon WWTP		
15	Unnamed wash below Globe WWTP to Pinal Creek	30	Mule Gulch below Bisbee WWTP to Highway 80 bridge		

* ADOC = Arizona Department of Corrections

What is Arizona's assessment criteria?

Most of Arizona's assessments are based on numeric water chemistry data. To determine whether there are sufficient data and that the data are representative of the surface water being assessed, the following attributes must be considered: core parametric coverage, number of samples, number of sampling events, seasonal distribution of samples, and sample locations. The criteria for assessment are described in the following paragraphs.

Core Parametric Coverage – Although all parameters with numeric standards are used for this assessment, a core set of parameters was established for each designated use **(text box above)**. These core parameters must be sampled during at least three independent sampling events to determine whether a specific designated use assigned to the surface water is "attaining."

Core parameters were selected based on EPA guidance in the draft *Consolidated Assessment and Listing Methodology* (CALM) document (EPA, 2001). This guidance places emphasis on narrative standards, suggesting that core indicators would include: bioassessments, habitat assessments, ambient toxicity testing, contaminated sediment, health of individual organisms, nuisance plant growth, algae, sediments, and odor and taste. Arizona's choice of core indicators has changed slightly due to standards changes and more recent water quality research. Dissolved chromium was dropped from Aquatic and Wildlife, and total chromium was added to Domestic Water Source. Lead was also added to Domestic Water Source. Metals were dropped from Full and Partial Body Contact. Core parameters will continue to change in the future as better assessment tools and criteria are developed.

Exempted Exceedance of Standards – Some exceedances are specifically exempted in Arizona's surface water standards or *Impaired Water Identification* rule **(Appendix B and C)**. In these cases, the exceedances would be noted in the monitoring tables, but not used as evidence of impairment:

- Naturally-occurring conditions (A.A.C. R18-11-119). For this assessment, the naturally-occurring conditions exempted included:
  - Low dissolved oxygen occurring due to documented ground water upwelling;
  - Areas minimally impacted by human activity, where springs are the source of a pollutant due to natural deposits; or
  - Minimally impacted drainage areas, such as a small drainage in the Grand Canyon National Park, where excess turbidity is due to natural erosion of sandstone geological formations.
- Operation and maintenance of a canal, drain, or municipal park lake (e.g., dewatering, dredging, and weed control) (A.A.C. R18-11-117);
- Routine physical or mechanical maintenance of dams and flood control structures may cause increases in turbidity (A.A.C. R18-11-118); and
- Discharge of lubricating oil associated with start-up of well pumps which discharge to canals (A.A.C. R18-11-117).

Core Parametric Coverage

For each designated use, at least three samples of the following parameters are required to assess the designated use as "attaining" uses:

Aquatic and Wildlife: dissolved oxygen, flow (if a stream) and depth (if a lake), hardness, pH, turbidity/suspended sediment concentration, total nitrogen and total phosphorus[1], dissolved metals (cadmium, copper, and zinc)

Fish Consumption: total mercury

Full Body or Partial Body Contact: *Escherichia coli*, pH

Domestic Water Source: nitrate/nitrite or nitrate, pH, total fluoride, and total metals (arsenic, chromium or chromium VI, and lead)

Agriculture Irrigation: pH, total boron, and total manganese

Agriculture Livestock Watering: pH, total copper, and total lead

Special notes:
1. Nitrogen and phosphorus are required only in surface waters with nutrient standards.
2. Dissolved oxygen, turbidity/SSC, and Escherichia coli are not required in ephemeral waters.
3. Suspended sediment concentration is not required in effluent dependent waters.

Note that some waters are not defined as a "surface water" in Arizona's Surface Water Quality Rules (e.g., wastewater treatment lagoons or impoundments). Surface water quality standards would not apply to these waters.

Spatial and Temporal Considerations – To determine whether there are sufficient samples and sampling events to support an assessment, first it must be determined that the samples are spatially and temporally independent, as required by the *Impaired Water Identification* rule (A.A.C. R18-11-603). Samples are spatially independent if they are collected more than 200 meters apart; or if collected less than 200 meters apart, samples were taken to characterize the effect of an intervening tributary, outfall, pollution source, or significant hydrographic or hydrologic change. Samples are temporally independent if they are collected more than seven (7) days apart.

If samples are neither spatially nor temporally independent (e.g., samples taken at different depths in a lake), the data will be represented by a calculated value. The method for calculating these values varies by type of surface water standard. If the standard was established to protect from immediate or acute impacts, then a maximum or worst case value for the data set is used. Examples of standards developed for acute exposures include: dissolved metals, chlorine, dissolved oxygen, and ammonia (some of these have chronic standards as well). However, if the standard was developed based on concern for lifetime or long-term exposure, then an appropriate measure of central tendency (e.g., mean, median, geometric mean) is used. Most standards that protect domestic water source, fish consumption, and agricultural uses fall into this second category.

Some surface water quality standards are evaluated by number of sampling events, rather than number of samples. Parameters that must be assessed in this manner are the acute and chronic standards for the Aquatic and Wildlife designated uses, the *Escherichia coli* standard for the Full and Partial Body Contact designated uses, and the nitrate standard for the Domestic Water Source use. An assessment is made based on sampling event, where more than one sampling event exceeding standards is assessed as "impaired." In other words, if an exceedance occurred at multiple sample sites on a reach within a 7-day period, these data are evaluated as one sampling event exceeding standards. In the monitoring tables, event exceedances are indicated in the summary row for each reach or lake.

Adjustments due to Testing Precision – Field measurements and certain analytical methods are sometimes less precise than other water quality measurements. Imprecision due to error are addressed through quality assurance/quality control procedures (e.g., calibration of the field equipment, placement of the instrument in the stream, holding temperatures); however, other variations are inherent in natural systems, equipment specifications, and analytical methods.

When a field sample measurement is within the manufacturer's specification for accuracy, the result is considered to meet the surface water quality standard. For the 2004 listing cycle, three field measurements were adjusted due to the following manufacturer specification's concerning precision:

- pH is ± 0.2 standard units,
- Dissolved oxygen is ± 0.2 mg/L, and
- Turbidity is ± 2 NTU.

For example, dissolved oxygen reported at 5.9 mg/L was not counted as a violation of the 6.0 mg/L standard (range 5.8 - 6.2).

Both lab and field bacterial analysis provide an estimation of bacterial density, reported in terms of Most Probable Number (MPN). For example, using the multiple tube technique, if the result is reported as 240 colony forming units (CFU), there is a 95% confidence level that the result is between 100 and 940 CFU (*Standard Methods for Examination of Water and Wastewater, 20th Edition*).

For the 2004 listing cycle, the imprecise nature of bacteria samples were considered when a 303(d) Listing decision would be based on results reported relatively near the single sample maximum standard of 235 CFU. Generally, a 303(d) Listing can result from only two (2) exceedances of the single sample maximum bacteria standard within a three-year period. However, when one of the two samples was near the standard (for example, only 240 CFU), the exceedances were considered "inconclusive" and did not result in a listing.

Assessment of each Designated Use (Step 1) – The following criteria are applied to assess the individual designated uses assigned to the surface water in rule:

- **Attaining** – A designated use is assessed as "attaining" if:
  - A. For most standards (except situations in B, C, and D below),
    1. Three or more temporally independent sampling events for all core parameters (see core parameters discussion above), collected across multiple seasons, and
    2. No exceedances, or
    3. If exceedances, 10 or more samples but fewer exceedances than would place the water on the Planning List based on Table 1 in the *Impaired Water Identification* rule.
  - B. For chronic standards,
    1. Three or more temporally independent sampling events for all core parameters, collected across multiple seasons, and
    2. No exceedances, or
    3. If exceedances, 10 or more samples, but less than 10% exceeding standards.
  - C. For acute standards,
    1. Three or more temporally independent sampling events for all core parameters, collected across multiple seasons, and
    2. No exceedances, or
    3. If exceedances, three years of samples since last exceedance.

D. For an annual mean, 90th percentile, or 30-day geometric mean, no exceedances within the assessment period.

- **Impaired** – A designated use is assessed as "impaired" if:

A. For most standards (except situations in B, C, and D below),
   1. 20 or more samples with the minimum number of exceedances listed in Table 2 (the 303d List) in the *Impaired Water Identification* rule, and
   2. Collected during three or more temporally independent sampling events.

B. For chronic standards:
   1. If at least 10 samples, 25% or more exceed chronic standards, or
   2. If fewer than 10 samples, at least three samples exceed chronic standards.

C. For acute standards,
   1. Exceedances occurred during two or more sampling events within a 3-year period, and
   2. Fewer than three years of samples since last exceedance.

D. For an annual mean, 90th percentile or 30-day geometric mean,
   1. Two or more exceedances within the assessment period, and
   2. Fewer than three years of samples since last exceedance.

- **Not attaining** -- A designated use is assessed as "not attaining" if it would be "impaired" except that:

A. A TMDL is approved by EPA and TMDL implementation is ongoing, but water is not yet attaining its designated uses.

B. Another action is occurring and documented that is expected to bring the surface water to "attaining" by the next assessment.

C. Investigation shows that impairment is due to pollution and not a pollutant. For example, investigation reveals that lake low dissolved oxygen and pH problems are not due to nutrient loadings but are solely due to the lack of flow.

D. The use is impaired based on the former turbidity standard (repealed in 2002), but there are insufficient suspended sediment concentration data (new sediment standard) to make an assessment. (Note Arizona has created this subcategory for the 2004 assessment.)

- **Inconclusive** – A designated use is assessed as inconclusive if:

A. Insufficient samples, exceedances, or core parameters to assess as "attaining," "not attaining," or "impaired."

B. Samples collected did not meet credible data requirements

C. There is evidence of a narrative violation (must be related to water quality and a specific surface water). For example,
   1. Fish kill documented,
   2. Beach closure documented,
   3. USFWS or AGFD have published that poor water quality is impacting aquatic life (fish anomalies, etc),
   4. Preliminary fish tissue studies indicate fish advisory may be warranted,
   5. Complaints have been received related to a narrative standard that are being investigated.

Assessment of the Reach or Lake (Step 2) – Once each designated use is assessed, they must be combined into an overall assessment of the stream reach or lake. A stream reach or lake can be placed into one of the following categories:

- **Attaining** -- Surface waters assessed as "attaining" a designated use fall into three categories:
  - Attaining All Uses – All designated uses were assessed as "attaining."
  - Attaining Some Uses – At least one designated use was assessed as "attaining" and all other uses were assessed as "inconclusive" (see "inconclusive" criteria below). Added to the Planning List for further monitoring.
  - Threatened – A use would be assessed as "attaining" except that analysis indicates that a standard may be exceeded before the next assessment. Added to the Planning List for further monitoring.

- **Impaired** -- Surface waters assessed as "impaired" for a designated use are listed as Impaired, included on the 303(d) List, and scheduled for completion of a TMDL for the listed pollutant.

- **Not attaining** -- Surface waters assessed as "not attaining" a designated use are listed as Not Attaining, with the exception of those that are also "impaired" (waters can be placed in only one Category). These waters are added to the Planning List for further monitoring.

- **Inconclusive** -- Surface waters are assessed as "inconclusive" if all designated uses are listed as Inconclusive. Any surface water with at least one "inconclusive" designated use is added to the Planning List for further monitoring.

- **Not assessed --** A surface water is shown as "not assessed" if there are only 1 or 2 sampling events, and no evidence of narrative violations, or if the data do not meet the credible data requirements. By default all designated uses are "inconclusive."

The flow chart **(Figure 14)** on page 13 helps to illustrate this second step of the assessment process.

Which "Cottonwood Wash" and how much was assessed?

To communicate assessment information and eliminate the ambiguity caused by many streams in Arizona having the same common name (e.g., Sycamore Creek) and a large number of unnamed washes, all of the assessed lakes and streams have been given identification numbers. These numbers are based on the drainage area in which the surface water is located (Hydrologic Unit Code area -- see chapter II) and a reach or lake number. These identification numbers can be linked to a digitized hydrography through a computerized Geographic Information System (GIS).

When assessment are complete ADEQ will provide the assessment information to EPA along with GIS coverages which indicate where the assessed lakes and streams are located. These linkages were also used in this report to generate the assessment maps provided in Chapter IV.

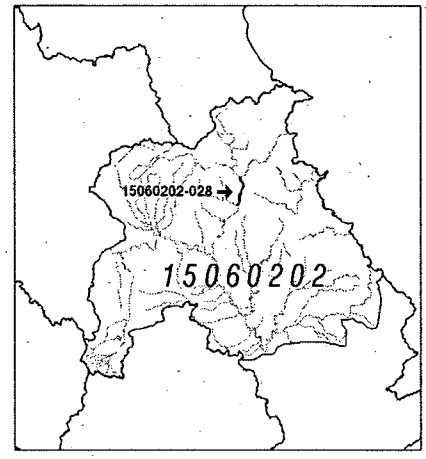


Figure 13. Reach Delineation

Arizona assesses an entire surface water "reach" or lake based on one or more monitoring sites **(Figure 13 and text box)**. As more monitoring data become available, differences in water quality in portions of a reach or a lake may become apparent, and the reach or lake is segmented. This has frequently occurred during TMDL investigations, as the extent of contamination becomes more defined. Reaches are also divided due to changes in designated uses.

Reach Definition and Delineation

The US Geological Survey divided streams across the United States into drainage areas or Hydrologic Unit Code areas (HUCs). The Environmental Protection Agency then divided the streams into reaches based on hydrological features such as tributaries and dams, and provided a unique number for each stream reach. These reaches have been further divided by ADEQ due to changes in designated uses, hydrology, and documented changes in water quality. In **Figure 14**, 15060202 is the HUC and 028 is the reach.

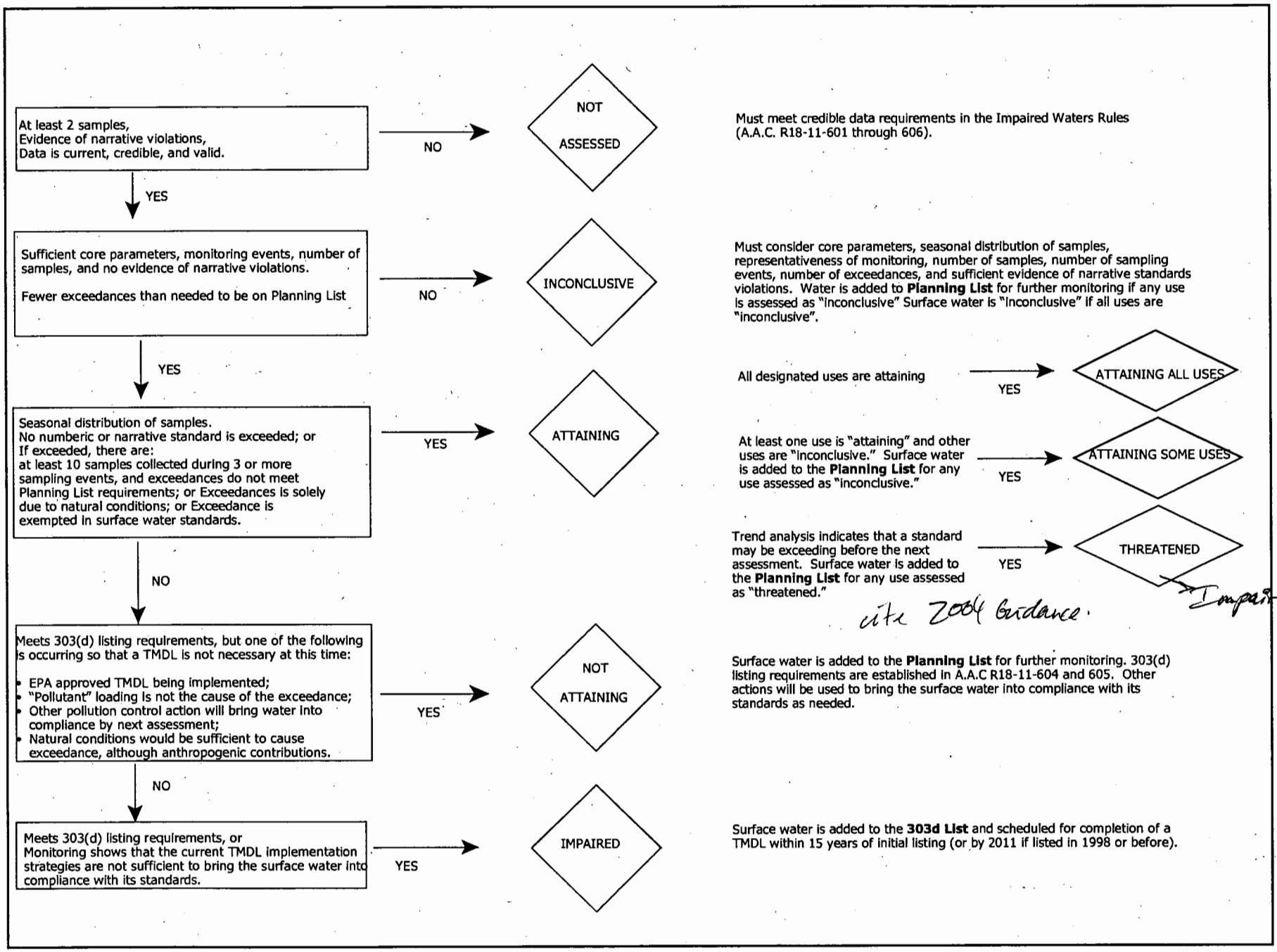


Figure 14. 2004 Assessment Process Diagram

How do lake and stream assessments differ?

The depth of a lake adds an additional level of complexity to an assessment. Samples are frequently collected at multiple levels in a lake because lower levels of a lake may have naturally higher chemical concentrations, especially when the lake is "stratified." Stratification is a natural process in which several horizontal water layers of different density may form in a lake. During stratification, the bottom layer (hypolimnion) is cool, high in nutrients, low in light, low in productivity, and low in dissolved oxygen. The top layer (epilimnion) is warm, higher in dissolved oxygen, light, and production, but normally lower in nutrients. The sharp boundary between the two layers is called a thermocline (metalimnion). Lake stratification is caused by temperature-created differences in water density.

Some measurements are more commonly taken in lakes or are used in a different way in lakes than in streams. For example, Chorophyll-*a,* Secchi depths, and volatile suspended solids results are compared to total suspended solids and turbidity values to determine whether excessive turbidity is actually related to a planktonic algal bloom and potential excessive nutrients or is related to suspended sediments and potential excessive lake sedimentation.

Trophic Status -- In addition to comparing water quality monitoring results with standards, ADEQ classifies lakes according to trophic status. Lakes are classified in a continuum of lake stages from low productivity to high productivity as nutrients accumulate or are depleted in the system.

Oligotrophic	Low algal or plant productivity
Mesotrophic	Medium algal or plant productivity
Eutrophic	High algal or plant productivity, and
Hypereutrophic	Very high algal or plant productivity and light-limited (Algae shades available light, inhibiting further growth)

A trophic classification is included in the assessment tables in Chapter V. The "Trophic Status Index" used in this assessment integrates phosphorus, nitrogen, Secchi depth, and Chlorphyll_*a* data, as indicated in **Table 6.** This trophic classification is based on: Brezonik, Patrick L. 1986. "Trophic State Indices: Rationale for Multivariate Approaches", *Lake and Reservoir Management*, USEPA, Office of Water. 440/5/84-001, pages 441-445. The Lakes Program is working on refining this trophic analysis in the future by accounting for macrophytes, algal diversity, and biovolume.

Given sufficient time, lakes go through a natural trophic progression accumulating nutrients and biomass. However, activities within the watershed may unduly speed up this process. It is important to note the hydrologic design and construction (e.g., shallow, with little water flow through) of most Arizona lakes may create management challenges such as high productivity and sedimentation.

Table 4. Trophic Classification Thresholds

	TROPHIC STATUS			
	Oligotrophic	Mesotrophic	Eutrophic	Hypereutrophic
Trophic Status Index	<30	30-45	45-65	>65
Chlorophyll-a (µg/L)	<5	5-12	12-20	>20
Secchi Depth (meters)	>3	1.2-3	0.6-1.2	<0.6
Total Phosphorus (mg/L)				
Phosphorus-limited	<10	10-20	20-35	>35
Nitrogen & Phosphorus-limited	<13	13-35	35-65	>65
Total Nitrogen (mg/L)				
Nitrogen-limited	<0.25	0.25-0.65	0.65-1.1	>1.1
Nitrogen & Phosphorus-limited	<0.28	0.28-0.75	0.75-1.2	>1.2

Nitrogen- limited = nitrogen : phosphorus ratio is <10.
Phosphorus-limited = nitrogen : phosphorus ratio is > 30.
Nitrogen and phosphorus-limited (colimited) = nitrogen : phosphorus ratio is 10-30

Can one get a copy of the data used for this assessment?

ADEQ continues to look for ways to share the data used in this assessment report with the public. Monitoring data are summarized in Chapter IV and are organized into tables by watershed. These summary tables indicate which agency and program collected the data, the amount and type of data, dates collected, frequency of exceedances, and more. Ambient surface water quality data collected by ADEQ staff can be obtained through EPA's STORET database on the internet at http://www.epa.gov/STORET.

IV. Surface Water Monitoring and Assessment Information: How Clean is My Stream or Lake?

How are assessments organized?

Arizona's 2004 assessments are presented by watershed in this chapter. For each watershed, the following information is provided:

- A watershed map illustrating monitoring sites and final assessments,
- Surface water quality monitoring tables, and
- Assessment tables.

Surface Water Monitoring Tables – The information in the surface water monitoring tables may be the most valuable information in this report. The monitoring tables summarize the water quality data used and provide the final assessment of individual surface waters. The agency or organization doing the monitoring, number of samples, years sampled, and constituents exceeding standards are summarized in these tables. These tables are the basis for 303(d) listing and/or delisting decisions. The information contained within is also used by many federal and state programs that permit activities that may add further discharges to these surface waters. These tables provide the most comprehensive list of monitoring activities in Arizona.

The tables are organized by site (sampling location), indicating what, if any, exceedances were found. The shaded summary rows combine all of the monitoring data from all of the sites in a particular stream reach or lake, and indicate the assessment for each designated use.

Assessment Tables - These are comprehensive tables, bridging current assessments with past assessments and impaired waters identification. The Assessment tables provide the following information:

- Assessments for each designated use: "attaining," "inconclusive," "not attaining," or "impaired" (see criteria in Chapter III);
- Which surface waters will be on the 2004 303(d) List submitted to EPA and the pollutants of concern;
- Which surface waters will be added to the Planning List and the pollutants of concern or reason for this action;
- Which pollutants and surface waters should be removed from the 2002 303(d) List and the reasons for this action; and
- Which TMDLs are ongoing or completed.

As requested in EPA's *Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act*, ADEQ's assessment tables place waters into one of the following five categories:

Category 1	All designated uses are met;
Category 2	Some of the designated uses are attaining but insufficient data to determine if remaining designated uses are attaining or impaired (also includes threatened waters);
Category 3	Insufficient data to determine whether any designated uses are attaining their uses;
Category 4	Water is impaired but a TMDL is not needed;
Category 5	Water is impaired and a TMDL is needed (on the 2004 303(d) List).

Chapter V takes these waters assessed and lists them by these categories. Those waters on the 303(d) List are then prioritized later for TMDL development.

How is a surface water added or removed from the 303(d) List?

Listing and Delisting Criteria - The criteria for listing or delisting a surface water are established in the *Impaired Water Identification* rule **(Appendix B)**. In general, the same amount and type of data used to place a surface water on the 303(d) List is needed to remove it from the list. For example, if two bacterial exceedances in a 3-year period put it on the list, then no exceedances in a 3-year period could remove it from the list. However, the data must be collected during similar hydrologic or climatic conditions (i.e., critical conditions) that occurred when samples were taken that indicated impairment, if those conditions still exist. All data must meet the credible data requirements.

When a water is assessed as "impaired," it is added to the 303(d) List. As noted in Chapter III, a designated use is impaired if any of the following occur:

- At least 20 samples were collected during three (3) or more sampling events and the minimum number of samples exceeded a standard (minimum exceedances based on number of samples collected is established in the *Impaired Water Identification* rule, Table 2

(Appendix B). This table starts with a minimum of five (5) exceedances among 20 samples.

- An acutely toxic pollutant exceeded its surface water quality standard more than once in a three-year period. Acutely toxic pollutants include:
  1. Those pollutants with Aquatic and wildlife acute toxic standards,
  2. Nitrate or nitrate/nitrite standards,
  3. Single sample maximum standards for bacteria.
- More than one exceedance of the following statistically-based criteria in surface water standards:
  1. An annual mean or 90th percentile for nutrients,
  2. 30-day geometric mean for bacteria,
  3. Aquatic and wildlife chronic criteria.

The criteria for removing a surface water from the 303(d) List can be summarized as follows:

- There is sufficient credible data to determine that the surface water is assessed as "attaining" its designated uses based on numeric and/or narrative criteria for the pollutant of concern (see criteria in Chapter III);
- A TMDL has been completed;
- An EPA approved change in the applicable surface water quality standard or designated use results in the surface water meeting standards;
- Neither the older data nor the current data is sufficient to meet the new impaired waters identification criteria. For example, there was an insufficient number of samples, sampling events, or exceedances.
- Investigations reveal that impairment is not due to a pollutant or surface water quality characteristic but rather due to "pollution" or other situation that cannot be readily addressed through a TMDL (e.g., hydrologic modifications).
- Investigations reveal that pollutant loadings from naturally occurring conditions alone are sufficient to cause a violation of applicable water quality standards.
- Reach is split and no current or historic data exist in one portion of the list that would support a listing.

When removed from the 303(d) List, a surface water is added to the Planning List for further monitoring or other action unless all designated uses are assessed as "attaining."

EPA Additions to the 303(d) List – Some of the surface waters in the following tables have a special notation indicating that a listing was made by EPA in 2002. EPA is not bound by Arizona's *Impaired Water Identification* rule nor Arizona's TMDL Statute (Appendix B), and has the authority to revise the 303(d) listings submitted by Arizona. In 2002, EPA added 19 additional surface waters to the 303(d) List and added 3 additional pollutants to surface waters already listed. EPA identified the following three situations where waters should have been listed according to federal guidelines, but were not on the Section 303(d) List submitted by Arizona:

- A fish consumption advisory has been issued based on pollutant concentrations in fish tissues collected in Arizona. EPA finds this to be evidence of narrative standards violations.

- Although a fish consumption advisory has not yet been issued, fish tissue data indicate that mercury or other bioaccumulative pollutant levels are much higher than EPA's screening guidelines designed to protect against adverse impacts to human health. This is also evidence of narrative standards violations.

- Available data indicate that several waters "substantially" exceed the state's water quality standards for specific pollutants. EPA concluded that the state's decision to not list waters with fewer than 20 samples was inconsistent with federal listing requirements if there were sufficient exceedances to support a reliable conclusion that standards are not being attained. For example, since five exceedances are sufficient for listing with 20 samples under Arizona's rules, five exceedances should be sufficient with fewer than 20 samples.

Based on discussions with EPA's Region IX staff, ADEQ anticipates that EPA will use the same criteria to revise the 2004 list being submitted as part of this report. As indicated in Chapter III, EPA may also add some waters to the 2004 303(d) List based on suspended sediment concentration and turbidity data. In the following assessment tables, a notation has been added to indicate which waters EPA may add to the 2004 303(d) List. However, EPA will provide a another public comment period Generalize it to be consistent w/ Federal listing requirements

Note that all waters placed on the 2002 303(d) List by EPA remained on the list and are indicated as "impaired." These waters will be delisted when they meet requirements established in Arizona's *Impaired Water Identification* rule for delisting (e.g., TMDL complete, changes in standards, sufficient new data indicate that designated uses are being attained).

TRUE? So did turbidity stay as impaired?

ADEQ is currently working on narrative implementation procedures that will provide the basis for Arizona to make a 303(d) listing due to narrative water quality standards violations. Arizona anticipates changes to the *Impaired Water Identification* rule and/or the surface water quality standards through the rulemaking process, when these procedures have received adequate public review.

How is a surface water added to or removed from the Planning List?

Planning List delisting criteria -- Criteria for removing a surface water or pollutant from the Planning List is also established in the *Impaired Water Identification* rule (R18-11-605.E). A surface water is removed from the Planning List based on the following criteria:

- The surface water is assessed as impaired and added to the 303(d) List; or
- There are sufficient data to determine that the surface water is "attaining" all of its designated uses.

Relating the Planning List and 303(d) List -- A surface water may be on both the Planning and 303(d) Lists due to different parameters of concern. As stated above, when a surface water is removed from the 303(d) List, it is either added to the Planning List or all designated uses are assessed as "attaining." A surface water is removed from the Planning List when all designated uses are assessed as either "attaining" or "impaired." The only way to be removed from both lists is to be assessed as "attaining" all designated uses.

Overview of Assessment Terms and Criteria

Criteria for assessing designated uses and surface waters are provided in Chapter III, along with definitions for designated uses and the "core parametric coverage." These definitions and criteria are complex, so information in Chapter III should be reviewed before looking at tables in this chapter. However, to facilitate review of the assessment tables, summary definitions of some assessment terms are provided on the next page.

Assessing Each Designated Use

Each designated use is assessed as follows:

Attaining – All surface water quality standards are being met based on a minimum of 3 monitoring events that provide seasonal representation and core parametric coverage. A subset of "attaining" are the Threatened waters where a surface water quality standard is currently being met, but a trend analysis indicates that the surface water is likely to be impaired before the next assessment.

Impaired – A surface water quality standard is not being met based on criteria identified in the Impaired Waters Identification Rule (**Appendix B**).

Not Attaining – A designated use would be assessed as "impaired" except that a TMDL does not need to be completed for one of the following reasons:
A. A TMDL has already been completed and approved by EPA but the surface water is not yet attaining uses. (Note that Arizona has created this subcategory for the 2004 assessment.)
B. Other pollution control requirements are reasonably expected to result in the attainment of water quality standards by the next regularly scheduled listing cycle.
C. The impairment is not related to a "pollutant" loading, but is caused by "pollution" (e.g. hydrologic modification).
D. The surface water would be impaired under the former turbidity standard (repealed in 2002).

Inconclusive – Monitoring or other assessment information available is insufficient to assess the surface water as "attaining," "threatened," "impaired," or "not attaining."

Combined Assessment of Uses

The individual designated use assessments are combined to provide an assessment of the surface water and each surface water is placed on one part of the 5-part assessment list as follows:

Attaining – A) All designated uses are assessed as "attaining" **(Category 1)**, or
B) At least one designated use is assessed as "attaining" and others are assessed as "inconclusive" or "threatened" **(Category 2)**.

Inconclusive – All designated uses are assessed as "inconclusive" **(Category 3)**.

Not Attaining – One or more designated use is assessed as "not attaining" and none are assessed as "impaired" **(Category 4)**.

Impaired – One or more designated is assessed as "impaired" **(Category 5)**.

Not Assessed – Existing data is limited to one or two samples or data did not meet credible data requirements established in the *Impaired Water Identification* rule. In these cases, the data is summarized in the monitoring tables; however, an assessment is not attempted. The surface water is added to the Planning List. If standards were exceeded, the surface water and the parameters of concern are shown on the assessment tables **(Category 3)**.

Designated Uses

Designated uses are specified for stream segments and lakes in the surface water rules (A.A.C. R18-11-104 and 105). Arizona's surface water designated uses include:

Aquatic and Wildlife
- **Coldwater Fishery** (A&Wc)
- **Warmwater Fishery** (A&Ww)
- **Ephemeral Stream** (A&We)
- **Effluent Dependent Water** (A&Wedw)

Full Body Contact (FBC) (i.e., swimming)
Partial Body Contact (PBC) (i.e., non-swimming recreation)
Fish Consumption (FC)
Domestic Water Source (DWS)
Agricultural Irrigation (AgI) and
Agricultural Livestock Watering (AgL

Core Parametric Coverage

Required to Assess a Designed Use as "Attaining" Uses:

Aquatic and Wildlife -- Dissolved oxygen, flow (if a stream) and depth (if a lake), hardness, pH, turbidity/SSC, total nitrogen and total phosphorus, dissolved metals (cadmium, copper, and zinc).
Fish Consumption -- Total mercury
Full Body or Partial Body Contact – *Escherichia coli*, pH
Domestic Water Source -- Nitrate/nitrite or nitrate, pH, total fluoride, total metals (arsenic, chromium or chromium VI, and lead)
Agriculture Irrigation -- Total boron, total manganese, pH
Agriculture Livestock Watering -- Total metals (copper and lead), pH

Notes:
*Nitrogen and phosphorus are required only in surface waters with nutrient standards.
*In ephemeral waters, the following parameters are not required, dissolved oxygen, turbidity/SSC and *Escherichia coli*.
*In effluent dependent waters and all lakes, SSC is not required.

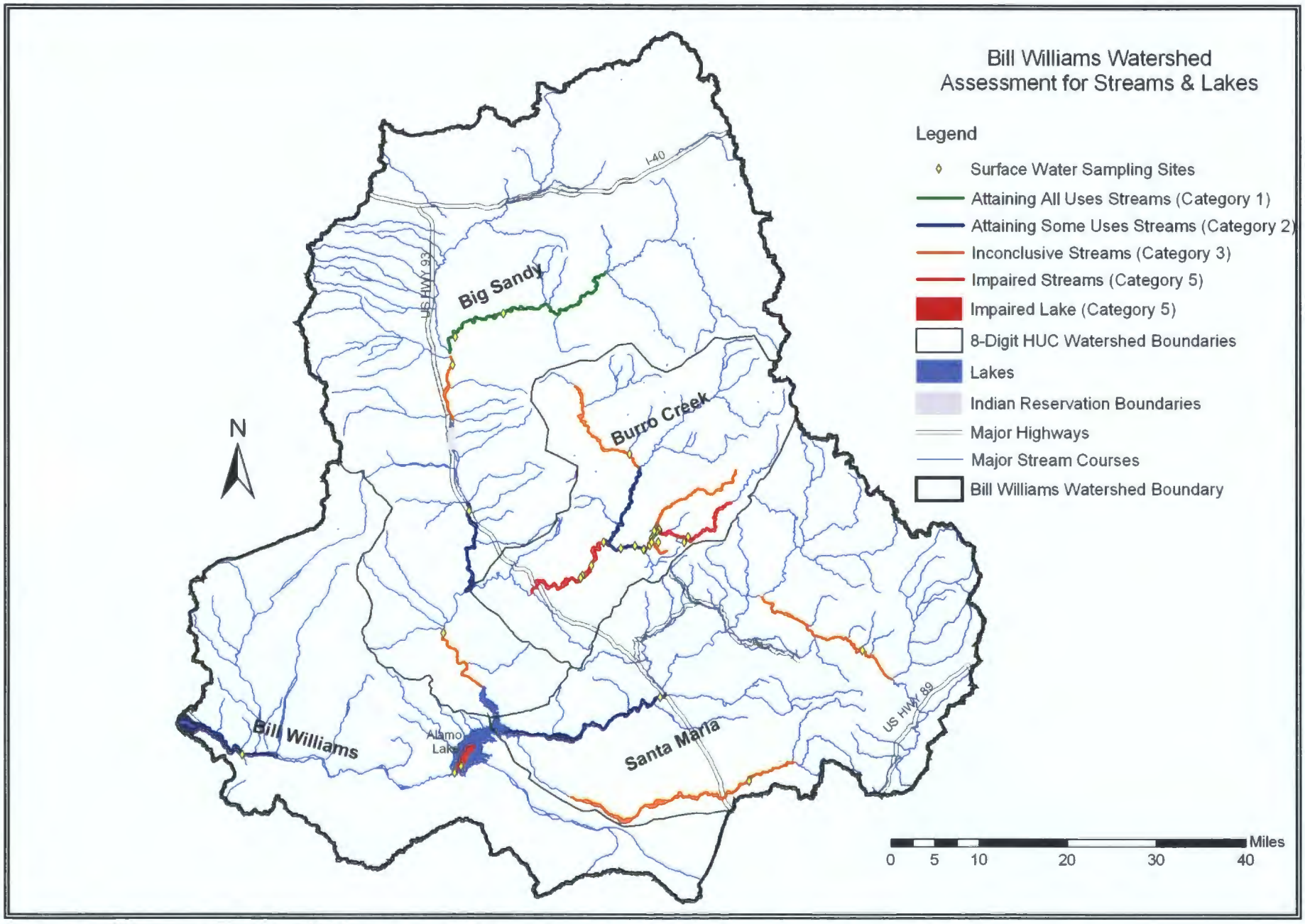


Figure 15. Bill Williams Watershed 2004 Monitoring and Assessment Map

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
STREAMS MONITORING DATA								
Big Sandy River Deluge Wash - Tule Wash AZ15030201-011 A&Ww, FBC, FC, AgL	ADEQ Ambient Monitoring Below Cane Springs BWBSR041.02 100458	1998 - 1 partial suite 1999 - 3 partial suites	Turbidity NTU	50 (A&Ww)	7 - 66	1 of 4		
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998 -1999** **4 sample events**	**Turbidity** **NTU**	**50** **(A&Ww)**	**7 - 66**	**1 of 4**	**Inconclusive (see comment)**	**ADEQ collected 4 samples in 1998-1999. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters (see list below) and one exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.** **Missing core parameters: *Escherichia coli*, dissolved metals (cadmium, copper, and zinc), and total metals (copper, lead, and mercury).**
Big Sandy River Sycamore - Burro Creek AZ15030201-004 A&Ww, FC, FBC, AgL	ADEQ Fixed Station Network Below Highway 93 bridge BWBSR024.50 100400	1998 - 1 partial suite 1999 - 3 full + 2 partial suites 2000 - 4 full suites 2001 - 4 full suites 2002 - 5 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.9 - 8.4 (63 - 93%)	3 of 19		
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.86	1 of 17		
			Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 5.7	1 of 1		Lab reporting limits for 16 other selenium samples were too high to use results for assessment.
			Turbidity NTU	50 (A&Ww)	3 - 80	2 of 19		
	Summary Row **A&Ww Inconclusive** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1998-2002** **19 sampling events**	**Dissolved oxygen** **mg/L**	**6.0** **(90% saturation)** **(A&Ww)**	**4.9 - 8.4** **(63 - 93%)**	**3 of 19**	**Attaining**	**ADEQ collected 19 samples in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to selenium exceedance.**
			Mercury (total) **µg/L**	**0.6** **(FC)**	**<0.5 - 0.86**	**1 of 17**	**Attaining**	
			Selenium (total) **µg/L**	**2** **(A&Ww chronic)**	**<5 - 5.7**	**1 of 1 event (insufficient samples)**	**Inconclusive**	
			Turbidity **NTU**	**50** **(A&Ww)**	**3 - 80**	**2 of 19**	**Attaining**	

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Big Sandy River Rupley - Alamo Lake North AZ15030201-001 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Near Signal BWBSR011.20 100457	1998 - 1 field 1999 - 4 field 2002 - 2 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.2 - 8.4 (62 - 110%)	2 of 7		
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998-2002** **7 sampling events**	**Dissolved oxygen mg/L**	**> 6.0 (90% saturation) (A&Ww)**	**5.2 - 8.4 (62 - 110%)**	**2 of 7**	**Inconclusive**	**ADEQ collected 7 samples in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to low dissolved oxygen and missing core parameters: *Escherichia coli*, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, copper, and lead).**
Bill Williams River point B - Colorado River AZ15030204-001 A&Ww, FC, FBC, AgL	USGS Fixed Station #09426600 At Mineral Wash near Planet BWBWR005.88 100924	1998 - 2 partial suites 1999 - 2 partial suites 2000 - 2 partial suites 2001 - 2 partial suites 2002 - 3 partial suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.3 - 7.5 (49 - 95% saturation)	1 of 11		
			Turbidity NTU	50 (A&Ww)	1 - 69	1 of 8		
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Attaining** **AgL Inconclusive**	**1998 -2002** **11 sampling events**	**Dissolved oxygen mg/L**	**> 6.0 (90% saturation) (A&Ww)**	**5.3 - 7.5 (49 - 95%)**	**1 of 11**	**Attaining**	**USGS collected 11 samples in 1998-2000. Assessed as "attaining some uses" and placed on the Planning List due to exceedance of the former turbidity standard and missing core parameters: total metals (mercury, copper, and lead).**
			Turbidity NTU	**50 (A&Ww)**	**1 - 69**	**1 of 8**	**Inconclusive**	**Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**
Boulder Creek unnamed wash at 34°41'14"/113°18'00" - Wilder Creek AZ15030202-006B A&Ww, FC, FBC, AgI, AgL	Phelps Dodge Bagdad Mine Instream Monitoring Below Tungstona Mine Below Warm Spring Creek Tungstona - 1 BWBOU006.27	1998 - 4 field, metals 1999 - 1 metals 2000 - 3 metals 2001 - 4 metals 2002 - 1 metals	No exceedances					
	Phelps Dodge Bagdad Mine Instream Monitoring At road to Tungstona Mine Tungstona - 2 BWBOU005.86	1998 - 4 field, metals 1999 - 1 metals 2000 - 4 metals 2001 - 4 metals 2002 - 4 metals	Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 3.4	4 of 4		Lab reporting limits for 13 other mercury samples were too high to use results for assessment.
				2.4 (A&Ww acute)	<0.2 - 3.4	1 of 17		
				0.8 (FC - total)	<0.2 - 3.4	1 of 4		Dissolved mercury data compared to total mercury standards.

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Phelps Dodge Bagdad Mine Instream Monitoring Above Hillside Mine Hillside - 2 BWBOU004.30	1998 - 4 field, metals 1999 - 2 metals 2000 - 3 metals 2001 - 4 metals 2002 - 4 metals	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 10	1 of 16		
				varies by hardness (A&Ww chronic)	<10 - 10	1 of 12		Lab reporting limits for 4 other copper samples were too high to use results for assessment.
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 2.9	2 of 2		Lab reporting limits for 11 other mercury samples were too high to use results for assessment.
				2.4 (A&Ww acute)	<0.2 - 2.9	1 of 4		
				0.6 (FC - total)	<0.2 - 2.9	1 of 16		Dissolved mercury data compared to total mercury standard.
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 1900	1 of 16		
				varies by hardness (A&Ww chronic)	<10 - 1900	1 of 16		
	ADEQ TMDL Program Site N Above Wilder Creek BWBOU004.15	2000 - 1 partial suite 2001 - 6 partial suites	No exceedances					
	Summary Row A&Ww Impaired FC Attaining FBC Inconclusive Agl Inconclusive AgL Attaining	1998 - 2002 54 samples 24 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 10	1 of 18 events (in 2001)	Inconclusive	Phelps Dodge and ADEQ collected 53 samples at 4 sites in 1998 - 2002. Assessed as "impaired" due to mercury. Placed on the Planning List due to copper exceedances and missing core parameters: total boron and *Escherichia coli*.
				varies by hardness (A&Ww chronic)	<10 - 10	1 of 19 events (5% exceed)	Attaining	
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 3.4	6 of 6 samples 5 of 5 events	Impaired	
				2.4 (A&Ww acute)	<0.2 - 3.4	1 of 17 events (in 2002)	Inconclusive	
				0.6 (FC - total)	<0.2 - 3.4	2 of 9	Inconclusive	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 1900	1 of 19 events (OK last 4 years)	Attaining	
				varies by hardness (A&Ww chronic)	<10 - 1900	1 of 19 events (5% exceed)	Attaining	

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Boulder Creek Wilder Creek - Copper Creek AZ15030202-005A A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program Site L Below Wilder Creek BWBOU004.10	2001 - 1 field, metals 2002 - 2 field, metals	No exceedances					
	ADEQ TMDL Program Site JJ At upstream Hillside Mine tailings BWBOU003.90	2002 - 4 field, metals	Arsenic (total) µg/L	50 (FBC)	14 - 58	1 of 4		
			Copper (total) µg/L	500 (AgL)	<15 - 15,200	1 of 4		
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<15 - 14,400	2 of 2		Lab reporting limits for 2 other copper samples were higher than the chronic standard.
				varies by hardness (A&Ww acute)	<15 - 14,400	2 of 4		
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.5 - 8.5	1 of 3		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Manganese (total) µg/L	10,000 (AgI)	30 - 23,400	1 of 4		
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	1.5	1 of 1		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL) 4.5 - 9.0 (AgI)	3.7 - 8.1	1 of 4		
			Zinc (total) µg/L	10,000 (AgI)	100 - 129,000	1 of 3		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	60 - 115,000	2 of 4		
				varies by hardness (A&Ww chronic)	60 - 115,000	2 of 4		
	ADEQ TMDL Program Site J Above Hillside Mine BWBOU003.81	2001 - 1 field, metals 2002 - 5 field, metals	Lead (total) µg/L	15 (FBC)	<5 - 17	1 of 6		
	ADEQ TMDL Program Site H Below Hillside Mine BWBOU003.72	2001 - 1 field, metals 2002 - 12 field, metals	Arsenic (total) µg/L	50 (FBC)	<5 - 287	9 of 13		
				200 (AgL)	<5 - 287	4 of 13		

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<15 - 80	1 of 10		Lab reporting limits for 3 other samples were too high to use results for assessment
				varies by hardness (A&Ww acute)	<15 - 80	1 of 13		
			Manganese (total) µg/L	10,000 (AgI)	40 - 11,800	2 of 13		
	ADEQ TMDL Program Site G Above Butte Creek and below lower tailings piles BWBOU003.42	2001 - 1 field, metals 2002 - 6 field, metals	Arsenic (total) µg/L	50 (FBC)	<5 - 74	4 of 7		
	Phelps Dodge Bagdad Mine Instream Monitoring Below Hillside Mine Hillside - 1 BWBOU003.31	1998 - 4 field, metals 1999 - 1 metals 2000 - 4 metals 2001 - 4 metals 2002 - 4 metals	Arsenic (dissolved) µg/L	50 (FBC - total)	15 - 400	9 of 9		Dissolved arsenic data compared to total arsenic standards.
				200 (AgL - total)	15 -400	3 of 6		
				190 (A&Ww chronic)	15 - 400	4 of 17		
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 3.8	2 of 2 (1 at detection limit)		Lab reporting limits for 15 other samples were too high to use results for assessment.
				2.4 (A&Ww acute)	<0.2 - 3.8	1 of 17		
				0.6 (FC - total)	<0.2 - 3.8	1 of 4		Dissolved mercury data compared to total mercury standard.
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgI, AgL)	7.5 - 9.5	1 of 17		
			Selenium (total) µg/L	2 (A&Ww)	<1 - 4	1 of 4		
	ADEQ TMDL Program Site E Below Butte Creek BWBOU003.15	2001 - 1 field, metals 2002 - 5 field, metals	Arsenic (total) µg/L	50 (FBC)	11 - 76	3 of 6		
	Phelps Dodge Bagdad Mine Instream Monitoring Above Copper Creek Boulder - 2 BWBOU002.78	1998 - 4 field, metals 1999 - 1 metals 2000 - 3 metals 2001 - 3 metals 2002 - 2 metals	Arsenic (total) µg/L	50 (FBC)	45 - 53	1 of 2		

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Inconclusive FBC Impaired Agl Inconclusive AgL Impaired	1998 - 2002 70 samples 30 sampling events	Arsenic (dissolved) µg/L	190 (A&Ww chronic)	5 - 400	4 of 30 events (13% exceed) (4 of 17 at Hillside site)	Inconclusive (Impaired)	Phelps Dodge and ADEQ collected 70 samples at 8 sites in 1998-2002. Assessed as "impaired" due to arsenic, copper, mercury, and zinc exceedances. TMDLs for arsenic, copper, and zinc were completed and sent to EPA for approval. If they are approved before the 303(d) List is sent to EPA, this reach will be assessed as "not attaining" for these parameters and placed on the Planning List for TMDL follow-up monitoring. On the Planning List due to selenium exceedances and missing core parameters: *Escherichia coli* and total boron.
			Arsenic (total) µg/L	50 (FBC)	<5 - 400	26 of 45	Impaired	
				200 (AgL)	<5 - 400	8 of 42	Impaired	
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<15 - 14,400	2 of 30 events (7% exceed)	Attaining	
				varies by hardness (A&Ww acute)	<15 - 14,400	2 of 30 events (in 2001)	Impaired	
			Copper (total) µg/L	500 µg/L (AgL)	<15 - 15,200	1 of 58	Attaining	
			Lead (total) µg/L	15 (FBC)	<5 - 17	1 of 13	Attaining	
			Manganese (total) µg/L	10,000 (Agl)	40 - 11,800	3 of 33	Attaining	
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 3.8	3 of 3 events	Impaired	
				2.4 (A&Ww acute)	<0.2 - 3.8	1 of 17 events (in 2002)	Inconclusive	
			Mercury (dissolved) µg/L	0.6 (FC - total)	<0.2 - 3.8	1 of 6	Inconclusive	
			pH SU	6.5 - 9 (A&Ww, FBC, AgL)	3.7 - 9.5	1 of 70 too low 1 of 70 too high	Attaining	
				4.5 -9.0 (Agl)	3.7 - 9.5	1 of 70 too low 1 of 70 too high	Attaining	
			Selenium (total) µg/L	2 (A&Ww chronic)	<1 - 4	1 of 4 events (insufficient events)	Inconclusive	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<0.01 - 115,000	2 of 30 events (in 2001)	Impaired	
				varies by hardness (A&Ww chronic)	<0.01 - 115,000	2 of 30 events (7% exceed)	Attaining	
			Zinc (total) µg/L	10,000 (Agl)	<0.01 - 129,000	1 of 33	Attaining	

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Boulder Creek Copper Creek - Burro Creek AZ15030202-005B A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program Site B Below Copper Creek BWBOU002.70	2001 - 1 field, metals 2002 - 6 field, metals	Arsenic (total) µg/L	50 (FBC)	11 - 52	1 of 7		
	Phelps Dodge Bagdad Mine Instream Monitoring Below Copper Creek Boulder - 1 BWBOU002.68	1998 - 4 field, metals 1999 - 1 metals 2000 - 4 metals 2001 - 4 metals 2002 - 4 metals	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 20	1 of 17		
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 7.2	1 of 1		Lab reporting limits for 16 other dissolved mercury samples were higher than the chronic standard and could not be used for assessment. Dissolved mercury data compared to total mercury standard.
				2.4 (A&Ww acute)	<0.2 - 7.2	1 of 17		
				0.6 (FC - total)	<0.2 - 7.2	1 of 8		
	ADEQ TMDL Program Site A Near Burro Creek BWBOU002.00	2001 - 1 metals + field 2002 - 5 metals + field	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	3.9 - 10.5	1 of 5		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Lead (total) µg/L	15 (FBC)	<5 - 34	1 of 6		
	Phelps Dodge Bagdad Mine Instream Monitoring Below Copper Creek Boulder - 4 BWBOU000.95	1998 - 3 field, metals 1999 - 1 metals 2000 - 4 metals 2001 - 4 metals 2002 - 1 metals	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 10	1 of 12		
			Selenium (total) µg/L	2 (A&Ww chronic)	<1 - 3	1 of 2		
	Summary Row A&Ww Inconclusive FC Attaining FBC Inconclusive AgI Inconclusive AgL Attaining	1998 - 2002 43 samples 24 sampling events	Arsenic (total) µg/L	50 (FBC)	<10 - 52	1 of 21	Attaining	Phelps Dodge and ADEQ collected 38 samples at 4 sites in 1998-2002. Assessed as "attaining some uses" due to mercury and selenium exceedances and missing core parameters: *Escherichia coli* and total boron.
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 20	2 of 24 events (8% exceed)	Attaining	
			Lead (total) µg/L	15 (FBC)	<5 - 34	1 of 13	Attaining	
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 7.2	1 of 1 event (insufficient events)	Inconclusive	
				2.4 (A&Ww acute)	<0.2 - 7.2	1 of 13 events (in 2002)	Inconclusive	
				0.6 (FC - total)	<0.2 - 7.2	1 of 14	Attaining	
			Selenium (total) µg/L	2 (A&Ww chronic)	<1 - 3	1 of 4 events (insufficient events)	Inconclusive	

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Burro Creek Francis Creek - Boulder Creek AZ15030202-008 A&Ww, FC, FBC, AgL Unique Water	Phelps Dodge Bagdad Mine Instream Monitoring Above Boulder Creek Burro - 3 BWBRO0011.54	1998 - 4 field, metals 1999 - 1 metals 2000 - 4 metals 2001 - 4 metals 2002 - 4 metals	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 20	1 of 17		
				varies by hardness (A&Ww acute)	<10 - 20	1 of 17		
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 0.5	1 of 1		Lab reporting limits for 16 other mercury samples were too high to use results for assessment.
	Summary Row **A&Ww Inconclusive** **FC Attaining** **FBC Inconclusive** **AgL Attaining**	**1998-2002** **17 sampling events**	**Copper (dissolved) µg/L**	**varies by hardness (A&Ww chronic)**	**<10 - 20**	**1 of 17 events (6% exceed)**	**Attaining**	**Phelps Dodge collected 17 samples in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to copper and mercury exceedances and missing core parameters: dissolved oxygen and *Escherichia coli*.**
				varies by hardness (A&Ww acute)	**<10 - 20**	**1 of 17 events (in 2002)**	**Inconclusive**	
			Mercury (dissolved) µg/L	**0.01 (A&Ww chronic)**	**<0.2 - 0.5**	**1 of 1 event (insufficient events)**	**Inconclusive**	
Burro Creek Boulder Creek - Black Canyon AZ15030202-004 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Below Boulder Creek BWBRO011.53 100403	1999 - 1 full suite 2000 - 3 full suites 2001 - 2 full + 1 partial suite 2002 - 3 full suites	Turbidity NTU	50 (A&Ww)	1 - 65	1 of 9		All core parameters collected at this site.
	Phelps Dodge Bagdad Mine Instream Monitoring Below Mammoth Wash Burro 4 BWBOR009.67	1998 - 4 field, metals 1999 - 1 field, metals 2000 - 3 field, metals 2001 - 3 field, metals 2002 - 2 field, metals	No exceedances					
	Phelps Dodge Bagdad Mine Instream Monitoring At Suicide Wash Burro 2 BWBOR008.75	1998 - 4 field, metals 1999 - 1 field, metals 2000 - 4 field, metals 2001 - 4 field, metals 2002 - 3 field, metals	Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 0.8	3 of 3		Lab reporting limits for 13 other mercury samples were too high to use results for assessment. Dissolved mercury data compared to total mercury standard.
				0.6 (FC - total)	<0.2 - 0.8	2 of 9		
	ADEQ Ambient Monitoring Below 6-mile Crossing BWBRO008.56 101365	2002 - 2 full suites	No exceedances					

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Attaining FBC Attaining AgL Attaining	1998 - 2002 51 samples 18 sampling events	Turbidity NTU	50 (A&Ww)	1 - 65	1 of 19	Attaining	Phelps Dodge and ADEQ collected 51 samples in 1998-2002. Assessed as "impaired" and placed on the Planning List due to mercury exceedances.
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 0.8	3 of 3 events	Impaired	
				0.6 (FC - total)		2 of 26	Attaining	
Butte Creek headwaters - Boulder Creek AZ15030202-163 A&Ww, FBC, FC (tributary rule)	Phelps Dodge Bagdad Mine Permit Monitoring At Butte Creek Butte - 1	1998 - 4 field, metals 1999 - 1 metals 2000 - 3 metals 2001 - 2 metals 2002 - 1 metals	Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 1.0	2 of 2		Lab reporting limits for 5 other mercury samples were too high to use results for assessment.
			Mercury (total) µg/L	0.6 (FC)	<0.2 - 1.0	1 of 7		
			Selenium µg/L	2 (A&Ww chronic)	<1 - 8	1 of 4		
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive	1998-2000 8 sampling events	Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.2 - 1.0	2 of 2 events (insufficient events)	Inconclusive	Phelps Dodge collected 8 samples in 1998-2000 at this site. Assessed as "inconclusive" and placed on the Planning List due to mercury and selenium exceedances and missing core parameters: dissolved oxygen and *Escherichia coli*.
			Mercury (total) µg/L	0.6 (FC)	<0.2 - 1.0	1 of 7	Inconclusive	
			Selenium (total) µg/L	2 (A&Ww chronic)	<1 - 8	1 of 4 events (insufficient events)	Inconclusive	
Date Creek Cottonwood Creek - unnamed reach 15030203-008 AZ15030203-003 A&Ww, FBC, FC, AgL	ADEQ Ambient Monitoring Above Date Creek Ranch BWDAT019.44 100529	2002 - 2 full suites	No exceedances					
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2002 2 sampling events	No exceedances				Not assessed	Insufficient monitoring data to assess.
Francis Creek headwaters - Burro Creek AZ15030202-012 A&Ww, FBC, FC, DWS, Agl, AgL Unique Water	ADEQ Ambient Monitoring Above Spencer Creek BWFRA001.73 100556	2002 - 2 full suites	No exceedances					
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive Agl Inconclusive AgL Inconclusive	2002 2 sampling events	No exceedances				Not assessed	Insufficient monitoring data to assess.

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Kirkland Creek Skull Valley - Santa Maria River AZ15030203-015 A&Ww, FBC, FC, AgI, AgL	ADEQ Ambient Monitoring Ritter's Ranch (Kirkland) BWKRK009.77 100408	2002 - 2 full suites	*Escherichia coli* CFU/100 mL	235 (FBC)	7 - 436	1 of 2		
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**2002** **2 sampling events**	***Escherichia coli*** **CFU/100 mL**	**235** **(FBC)**	**7 - 436**	**1 of 2 events (insufficient events)**	**Inconclusive**	**Insufficient monitoring data to assess.** **Placed on the Planning List due to *Escherichia coli* exceedance.**
Santa Maria River Bridle Wash - Date Creek AZ15030203-009 A&Ww, FC, FBC, AgI, AgL	ADEQ Fixed Station Network Below Highway 93 bridge BWSMR013.57 100399	1999 - 1 full suite 2000 - 4 full suites 2001 - 4 full suites 2002 - 5 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	2.7 - 9.5 (35 - 115%)	2 of 14		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Escherichia coli CFU/100 mL	235 (FBC)	<2 - 390	1 of 14		
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Inconclusive** **AgI Attaining** **AgL Attaining**	**1999 - 2002** **14 sampling events**	***Escherichia coli*** **CFU/100 mL**	**235** **(FBC)**	**<2 - 390**	**1 of 14 events (occurred in 2001)**	**Inconclusive**	**ADEQ collected 14 samples in 1998 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to the *Escherichia coli* exceedance.**
Trout Creek Cow Creek - Knight Creek AZ15030201-014 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Above Divide Canyon BWTRT006.15 100670	2002 - 1 full suite	No exceedances					
	ADEQ Fixed Station Network Near Wikieup BWTRT001.79 100397	1999 - 3 full suites 2000 - 4 full suites 2001 - 4 full suites 2002 - 5 full suites	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1999-2002** **17 sampling events**	**No exceedances**					**ADEQ collected 17 samples in 1999-2002. Assessed as "attaining all uses."**
Wilder Creek headwaters - Boulder Creek AZ15030202-007 A&Ww, FC, FBC (tributary rule)	ADEQ TMDL Program Site M Near Boulder Creek BWWLD000.27	2000 - 1 field, metals 2001 - 6 field, metals	No exceedances					
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**2000-2001** **7 sampling events**	**No exceedances**					**ADEQ collected 7 samples in 2000-2001 as part of the Boulder Creek TMDL. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: turbidity/SSC, *Escherichia coli*, dissolved cadmium, and total mercury.**

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
LAKES MONITORING DATA								
Alamo Lake AZL15030204-0040A A&Ww, FC, FBC, AgL	USFWS/Corps of Engineers Ambient Monitoring BWALA-1	1998 - 10 partial suites 1999 - 1 full + 7 partial suites 2000 - 4 full + 8 partial suites 2001 - 3 full + 9 partial suites 2002 - 3 full + 7 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww chronic)	<0.01 - 0.72	2 of 36		
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	2.7 - 14.5	4 of 47		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	7.4 - 10.9	14 of 47		
	USFWS/Corps of Engineers Ambient Monitoring BWALA-2	1998 - 10 partial suites 1999 - 8 partial suites 2000 - 1 full + 11 partial suites 2001 - 3 full + 9 partial suites 2002 - 3 full + 7 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww chronic)	<0.01 - 0.69	1 of 36		
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	2.0 - 16.3	3 of 47		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	7.1 - 10.9	11 of 47		
	USFWS/Corps of Engineers Ambient Monitoring BWALA-3	1998 - 10 partial suites 1999 - 8 partial suites 2000 - 1 full + 11 partial suites 2001 - 3 full + 9 partial suites 2002 - 3 full + 7 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww chronic)	<0.01 - 0.42	1 of 36		
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	2.0 - 14.7	2 of 47		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	7.7 - 10.5	9 of 47		
	USFWS/Corps of Engineers Ambient Monitoring BWALA-4	1998 - 10 partial suites 1999 - 8 partial suites 2000 - 1 full + 11 partial suites 2001 - 1 full + 11 partial suites 2002 - 2 full + 8 partial suites	Ammonia mg/L	varies by pH and termperature (A&Ww chronic)	<0.01 - 0.6	2 of 36		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	1.7 - 16.4	2 of 46		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	7.4 - 10.6	12 of 46		
	ADEQ Lakes Program BWALA - A (deepest) 101350	2002 - 2 field, 1 *Escherichia coli*	No exceedances					
	ADEQ Lakes Program BWALA - B (mid lake) 101351	2002 - 2 field, 1 *Escherichia coli*	No exceedances					

TABLE 5. BILL WILLIAMS WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Impaired* FBC Impaired AgL Impaired	1998-2002 212 samples 54 sampling events	Ammonia mg/L	varies by pH and temperature (A&Ww chronic)	<0.01 - 0.72	6 of 144 samples 2 of 36 events (6% exceed)	Attaining	US Fish and Wildlife collected 208 samples during 52 sample events in 1998-2002. ADEQ collected field measurements at two sites during 4 sampling events. Assessed as "impaired" due to high pH and mercury in fish tissue. *EPA placed this reach on the 2002 303(d) List for mercury in fish tissue. Once listed, the surface water cannot be delisted until a TMDL is complete or there are sufficient data collected to indicate that mercury in fish tissue is no longer a concern. Placed on the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (cadmium, copper, and zinc), and total metals (copper and lead).
			Dissolved oxygen mg/L	> 6.0 (90% saturation (A&Ww)	1.7 - 15.3	11 of 190	Attaining	
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	7.4 - 10.9	46 of 189	Impaired	

TABLE 6. BILL WILLIAMS WATERSHED -- ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
BILL WILLIAMS WATERSHED -- STREAM ASSESSMENTS				
Big Sandy River Deluge Wash - Tule Wash 8 miles AZ15030201-011	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive	On the Planning List due to: 1. Former turbidity standard exceedance (1 of 4 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 2. Missing core parameters: *Escherichia coli*, dissolved metals (cadmium, copper, and zinc) and total metals (copper, lead, and mercury).		
Big Sandy River Sycamore Creek - Burro Creek 14 miles AZ15030201-004	A&Ww Inconclusive FC Attaining FBC Attaining AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to chronic selenium exceedance (1 of 1 sampling event).		
Big Sandy River Rupley Wash - Alamo Lake North 10 miles AZ15030201-001	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive	On the Planning List due to: 1. Low dissolved oxygen (2 of 7 samples). 2. Missing core parameters: *Escherichia coli*, dissolved metals (cadmium, copper, and zinc), and total metals (copper, lead, and mercury).		
Bill Williams River Point B - Colorado River 15 miles AZ15030204-001	A&Ww Inconclusive FC Inconclusive FBC Attaining AgL Inconclusive Category 2 — Attaining Some Uses	On the Planning List due to: 1. Former turbidity standard exceedance (1 of 8 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 2. Missing core parameters: total metals (copper, lead, and mercury).		
Boulder Creek unnamed wash at 34°41'14"/113°18'00" - Wilder Creek 14 miles AZ15030202-006B (Reach was split into coldwater and warmwater segments since the last assessment. No current data in 006A.)	A&Ww Impaired FC Attaining FBC Inconclusive AgI Inconclusive AgL Attaining Category 5 – Impaired	On the Planning List due to: 1. Acute copper exceedance (1 of 18 events, occurred in 2001). 2. Missing core parameters: total boron and *Escherichia coli*.	Add mercury to the 303(d) List due to chronic mercury exceedances (5 of 5 sampling events). Delist fluoride due to change in fluoride standards. No exceedances occurred under the new standard.	In 2003, ADEQ began a watershed-wide TMDL for mercury because of the Alamo Lake mercury listing. This included Burro Creek, Boulder Creek, Big Sandy River, and the Sante Maria sub-besins.
Boulder Creek Wilder Creek - Copper Creek 3 miles AZ15030202-005A	A&Ww Impaired FC Inconclusive FBC Impaired AgI Inconclusive AgL Impaired Category 5 — Impaired	On the Planning List due to: 1. Acute mercury exceedance (1 of 17 sampling events, occurred in 2002). 2. Chronic selenium exceedences (1 of 4 sampling events). 3. Missing core parameters: total boron and *Escherichia coli*. Remove beryllium from the Planning List. Standards were revised in 2002. No exceedance under the new standards.	A TMDL for arsenic, copper, and zinc has been completed and is awaiting EPA approval. If approved before the 2004 303(d) List is submitted to EPA (April 1, 2004), this reach will be moved to Category 4A, assessed as "not attaining," and these parameters will be added to the Planning list for TMDL follow-up monitoring. Chronic arsenic exceedances in 4 of 30 sampling events, total arsenic exceedances (26 of 45 samples), chronic and acute copper exceedances (2 of 30 sampling events), and chronic and acute zinc exceedances (2 of 30 sampling events). Add mercury to the 303(d) List for 3 of 3 chronic mercury exceedances.	In 2003, ADEQ began a watershed-wide TMDL for mercury because of the Alamo Lake mercury listing. This included Burro Creek, Boulder Creek, Big Sandy River, and the Santa Maria sub-basins. Ongoing coordination between the Bureau of Land Management , Arizona State Land Department, and private owners to conduct cleanup activities at all three sites.

TABLE 6. BILL WILLIAMS WATERSHED -- ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Boulder Creek Copper Creek - Burro Creek 5 miles AZ15030202-005B	A&Ww Inconclusive FC Attaining FBC Inconclusive AgI Inconclusive AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to: 1. Acute mercury exceedance (1 of 13 sampling events, occurred in 2002) and chronic mercury exceedance (1 of 1 sampling event). 2. Chronic selenium exceedance (1 of 4 sampling events). 3. Missing core parameters: total boron and *Escherichia coli*.	Hg - [illegible]	In 2003, ADEQ began a watershed-wide TMDL for mercury because of the Alamo Lake mercury listing. This included Burro Creek, Boulder Creek, Big Sandy River, and the Santa Maria sub-basins.
Burro Creek Francis Creek - Boulder Creek 14 miles AZ15030202-008 Unique Water	A&Ww Inconclusive FC Attaining FBC Inconclusive AgL Attaining Category 2 — Attaining Some Uses	On Planning List due to: 1. Acute and chronic copper exceedance (1 of 17 sampling events, occurred in 2002). 2. Chronic mercury exceedance(1 of 1 sampling event,). 3. Missing core parameters: dissolved oxygen and *Escherichia coli*. Remove turbidity from the Planning List. Current monitoring indicates 0 exceedances in 4 samples.	Cu [illegible]	
Burro Creek Boulder Creek - Black Canyon 17 miles AZ15030202-004	A&Ww Impaired FC Attaining FBC Attaining AgL Attaining Category 5 – Impaired		Adding to the 303(d) List due to chronic mercury exceedances (3 of 3 events).	In 2003, ADEQ began a watershed-wide TMDL for mercury because of the Alamo Lake mercury listing. This included Burro Creek, Boulder Creek, Big Sandy River, and the Santa Maria sub-basins.
Butte Creek headwaters - Burro Creek 3 miles AZ15030202-163	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 — Inconclusive AgI and AgL designated uses no longer apply to this reach due to changes in the tributary rule.	On Planning List due to: 1. Total mercury exceedance (1 of 7 samples) and chronic mercury exceedances (2 of 2 sampling events). 2. Chronic selenium exceedances (1 of 4 sampling events). 3. Missing core parameters: dissolved oxygen and *Escherichia coli*.	add Hg: 3 exceedances	In 2003, ADEQ began a watershed-wide TMDL for mercury because of the Alamo Lake mercury listing. This included Burro Creek, Boulder Creek, Big Sandy River, and the Santa Maria sub-basins.
Date Creek Cottonwood Creek - unnamed tributary 15030203-008 35 miles AZ15030203-003	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (2 samples).		
Francis Creek headwaters - Burro Creek 24 miles AZ15030202-012 Unique Water	A&Ww Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (2 samples). 2. Added ~~in 2002 due to~~ exceedance of former turbidity standard (2 of 12 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
Kirkland Creek Skull Valley - Santa Maria River 23 miles AZ15030203-015	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (2 samples). 2. *Escherichia coli* exceedance (1 of 2 sampling events).		

TABLE 6. BILL WILLIAMS WATERSHED -- ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Santa Maria River Bridle Wash - Date Creek 25 miles AZ15030203-009	A&Ww Attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to *Escherichia coli* exceedance (1 of 14 events, occurred in 2001).		
Trout Creek Cow Creek - Knight Creek 32 miles AZ15030201-014	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 — Attaining All Uses			
Wilder Creek headwaters - Boulder Creek 15 miles AZ15030202-007	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 — Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, dissolved cadmium, total mercury, and turbidity/SSC.		
BILL WILLIAMS WATERSHED -- LAKE ASSESSMENTS				
Alamo Lake 1,414 acres AZL15030204-0040A	A&Ww Impaired FC Impaired FBC Impaired AgL Impaired Category 5 — Impaired Trophic Status -- Eutrophic - Hypereutrophic	On the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (cadmium, copper, and zinc), and total metals (copper and lead).	EPA placed this reach on the 2002 303(d) List because of high concentrations of mercury in fish tissue. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use evidence of narrative violations in a listing decision, but once listed the surface water cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that mercury in fish tissue is no longer a concern (fish consumption advisory removed). ADEQ is currently collecting data and investigating potential mercury sources in support of completing a TMDL. On 303(d) List (since 1996) due to high pH. Exceeded standards in 46 of 189 samples. Delist dissolved oxygen. Attaining uses with only 11 exceedances in 190 samples. Delist sulfide. New sulfide standards were adopted in 2002. No exceedances of the new standard.	Mercury does not stay in an aqueous state and bioaccumulates rapidly. Additionally, most laboratory reporting limits are not low enough to assess chronic mercury standards; therefore, lack of exceedances in the water column does not provide sufficient information about mercury problems in the lake. In 2003, ADEQ began a watershed-wide TMDL for mercury because of the Alamo Lake mercury listing. This included Burro Creek, Boulder Creek, Big Sandy River, and the Santa Maria sub-basins.

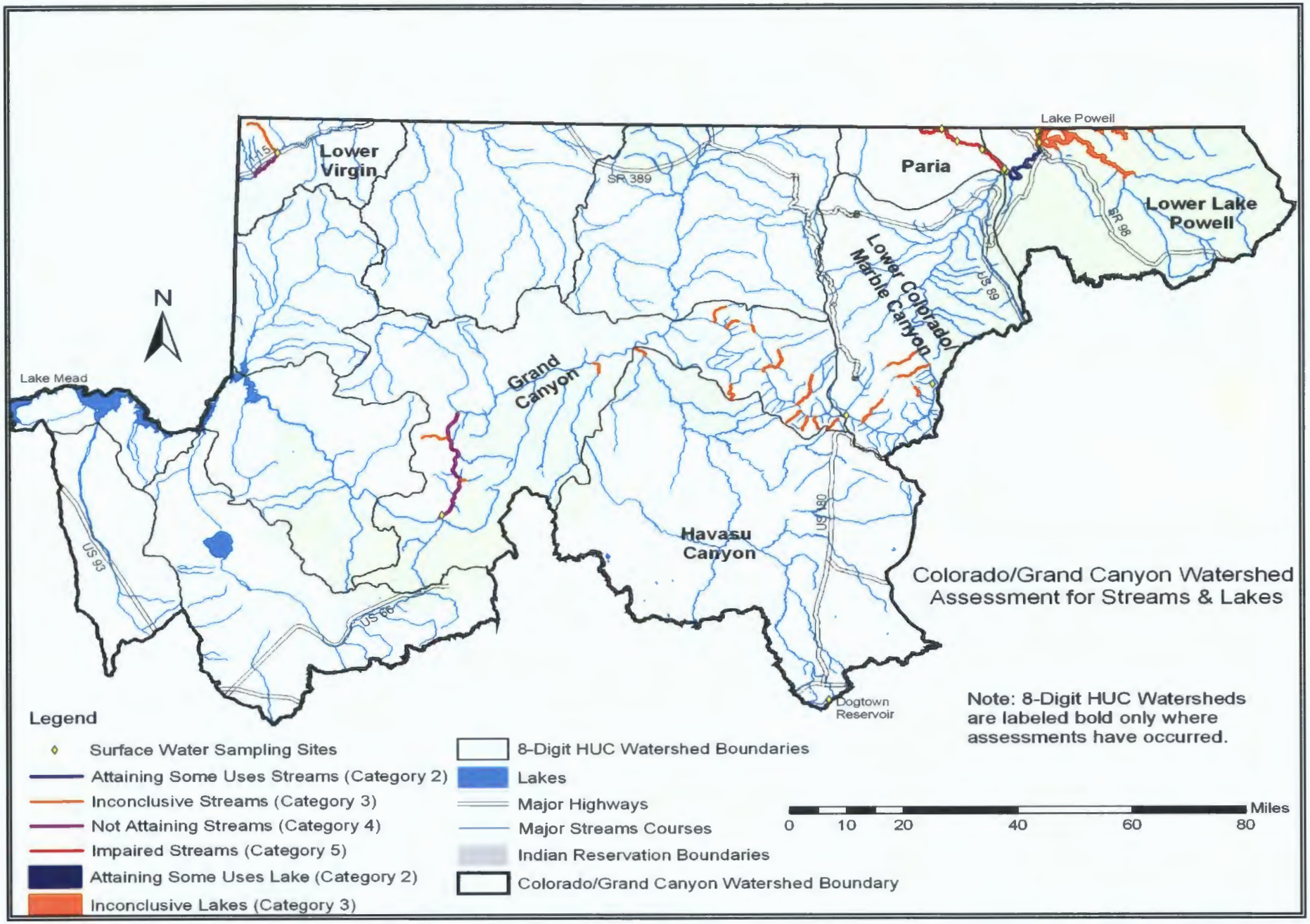


Figure 16. Colorado - Grand Canyon Watershed 2004 Monitoring and Assessment Map

TABLE 7. COLORADO - GRAND CANYON WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Colorado River Lake Powell - Paria River AZ14070006-001 A&Wc, FC, FBC, DWS, AgI, AgL	USGS Fixed Station #09380000 At Lee's Ferry CMCLR327.39 100743	1998 - 6 partial suites 1999 - 6 partial suites 2000 - 6 partial suites 2001 - 4 partial suites 2002 - 4 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.5 - 10.1 (99 - 63%)	1 of 25		
	Reach Summary Row **A&Wc Attaining** **FC Attaining** **FBC Attaining** **DWS Inconclusive** **AgI Inconclusive** **AgL Attaining**	**1996-2000** **26 sampling events**	**Dissolved oxygen mg/L**	**> 7.0 (90% saturation) (A&Wc)**	**6.5 - 10.1 (99 - 63%)**	**1 of 25**	**Attaining**	**USGS collected 26 samples 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: total fluoride and total boron.**
Colorado River Parashant Canyon - Diamond Creek AZ15010002-003 A&Wc, FC, FBC, DWS, AgI, AgL	USGS Fixed Station # 09404200 Above Diamond Creek CMCLR233.40 101483	1998 - 12 partial suites 1999 - 12 partial suites 2000 - 9 partial suites 2001 - 8 partial suites 2002 - 8 partial suites	Selenium (total) µg/L	2.0 (A&Wc chronic)	1 - 3.8	9 of 43		All 9 selenium exceedances occurred in 2000-2002.
			Suspended sediment concentration (SSC) mg/L	80 (geometric mean) (A&Wc)	12 - 1500	see comment below		
			Turbidity NTU	10 (A&Wc)	0.4 - >1000	14 of 30		
	Summary Row **A&Wc Not attaining** **FC Inconclusive** **FBC Inconclusive** **DWS Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1998-2002** **49 sampling events**	**Selenium (total) µg/L**	**2.0 (A&Wc chronic)**	**1 - 3.8**	**9 of 43 events (21% exceed)**	**Inconclusive**	**US Geological Survey collected 49 samples in 1998-2002.** **Reach was on the 2002 303(d) List for turbidity. Assessed as "not attaining" and added to the Planning List until sufficient suspended sediment concentration (SSC) or turbidity data are collected to make an assessment of "attaining" or "impaired."** **Added to the Planning List due to:** **1. Potential exceedances of the SSC geometric mean standard.** **2. Selenium exceedances and**
			Suspended sediment concentration (SSC) mg/L	**80 (geometric mean) (A&Wc)**	**12 - 1500**	**see comment at right**	**Inconclusive**	
			Turbidity NTU	**10 (A&Wc)**	**0.4 - >1000**	**14 of 30**	**Not attaining (see comment)**	**3. Missing core parameters: total boron, *Escherichia coli* and total metals (mercury, arsenic, manganese, copper, and lead).**

TABLE 7. COLORADO - GRAND CANYON WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	USE SUPPORT	COMMENTS
Paria River Utah border - Colorado River AZ14070007-123 A&Ww, FC, FBC	ADEQ TMDL Program Site 4 At mile marker 7.5 CMPAR022.37 101076	1998 - 1 field suite 1999 - 5 partial suites 2000 - 5 partial suites 2001 - 1 partial suite	Arsenic (dissolved) µg/L	360 (A&Ww acute- total)	2 - 457.7	1 of 11		Dissolved arsenic compared to total arsenic standards.
				190 (A&Ww chronic - total)		1 of 11		
				50 (FBC - total)		1 of 11		
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.8 - 10.6	3 of 11		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
			Lead (dissolved) µg/L	varies by hardness (A&Ww acute)	2 - 90.7	1 of 11		Dissolved lead data compared to total lead standards.
				varies by hardness (A&Ww chronic)		1 of 10		
				15 (FBC - total)		1 of 11		
			Selenium (dissolved) µg/L	20 (A&Ww acute - total)	<5 - 279.4	5 of 11		Dissolved selenium data compared to total selenium standards. Lab reporting limits on 4 other selenium samples were too high to use results for assessment.
				2.0 (A&Ww chronic - total)	<5 - 279.4	6 of 7		
			Turbidity NTU	50 (A&Ww)	4 - 492	8 of 11		
	ADEQ TMDL Program Site 5 at mile marker 15 CMPAR013.79 101075	1998 - 1 partial suite 1999 - 5 partial suites 2000 - 5 partial suites 2001 - 1 field	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4 - 10.7	3 of 11		Investigation shows that low dissolved oxygen is solely due to natural conditions.
			Lead (dissolved) µg/L	varies by hardness (A&Ww chronic)	2 - 11.4	2 of 11		
			Selenium (dissolved) µg/L	20 (A&Ww acute - total)	<5 - 56.3	5 of 11		
				2.0 (A&Ww chronic - total)	<5 - 56.3	6 of 6		Lab reporting limits for 3 other selenium samples were too high to use results for assessment.
			Turbidity NTU	50 (A&Ww)	0 - 441	8 of 11		

TABLE 7. COLORADO - GRAND CANYON WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	USE SUPPORT	COMMENTS
	ADEQ TMDL Program Site 6 at mile marker 22.5 CMPAR007.95 101074	1998 - 1 full suite 1999 - 5 full suites 2000 - 4 full suites 2001 - 1 partial suite	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.3 - 9.1	3 of 11		Low dissolved oxygen is due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
			Lead (dissolved) µg/L	varies by hardness (A&Ww chronic)	2 - 5.8	1 of 10		
			Selenium (dissolved) µg/L	20 (A&Ww acute - total)	<5 - 25	3 of 11		Dissolved selenium data compared to total selenium standards. Laboratory reporting limits for 6 other selenium samples were too high to use results for assessment.
				2.0 (A&Ww chronic - total)	<5 - 25	5 of 5		
			Turbidity NTU	50 (A&Ww)	6.2 - 441	8 of 10		
	ADEQ and Northern AZ Univ. TMDL Program Site 7 at Lees Ferry CMPAR000.55 101073	1998 - 1 full suite 1999 - 5 full suites 2000 - 5 full suites 2001 - 1 full suite	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.3 - 8.2	4 of 11		Low dissolved oxygen is due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
			Selenium (dissolved) µg/L	20 (A&Ww acute - total)	<5 - 26.2	1 of 12		Dissolved selenium data compared to total selenium standards. Lab reporting limits for 6 other selenium samples were too high to use results for assessment.
				2.0 (A&Ww chronic - total)	<5 - 26.2	6 of 6		
			Turbidity NTU	50 (A&Ww)	7 - 441	8 of 11		
	USGS Special Investigation At Lees Ferry CMPAR001.03 101447	1998 - 66 SSC 1999 - 58 SSC 2000 - 50 SSC	Suspended sediment concentration (SSC) mg/L	80 (A&Ww (geometric mean)	11 - 1,200,000	see comment below		

TABLE 7. COLORADO - GRAND CANYON WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Attaining FBC Inconclusive	1998 - 2001 222 samples 186 sampling events	Arsenic (dissolved) µg/L	360 (A&Ww - total)	<2 - 457.7	1 of 12	Attaining	ADEQ's TMDL Program collected 48 samples at 4 sites in 1998 - 2001. USGS collected 174 suspended sediment concentration samples in 1998-2000. Assessed as "impaired" due to selenium exceedances. Turbidity exceedances also indicate impairment based on the former turbidity standard. Reach is also placed in the 4D category based on turbidity exceedances. Reach is also on the Planning List due to: 1. Lead exceedances, 2. Missing core parameters, and, 3. Potential exceedances of the SSC geometric mean standard. Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added to the 2004 303(d) List by EPA. Preliminary studies indicate that turbidity and SSC exceedances are a natural condition caused by erosion of sandstone cliffs.
				190 (A&Ww chronic - total)		1 of 12 (8% exceed)	Attaining	
				50 (FBC - total)		1 of 48	Attaining	
			Lead (dissolved) µg/L	varies by hardness (A&Ww acute)	2 - 90.7	1 of 48 (in 1999, only 2 years data since)	Inconclusive	
				varies by hardness (A&Ww chronic)	2 - 90.7	4 of 48 samples 2 of 12 events (17% exceed)	Inconclusive	
				15 (FBC - total)	2 - 90.7	1 of 48	Attaining	
			Selenium (dissolved) µg/L	20 (A&Ww acute - total)	<5 - 279.4	14 of 48 samples 6 of 12 events (1999 and 2000)	Impaired	
				2 (A&Ww chronic - total)	<5 - 279.4	6 of 12 events (50% exceed)	Impaired	
			Suspended sediment concentration (SSC) mg/L	80 (A&Ww) (geometric mean)	11 - 1,200,000	see comment at right	Inconclusive	
			Turbidity NTU	50 (A&Ww)	0 - 492	32 of 43	Not attaining (see comment)	

TABLE 7. COLORADO - GRAND CANYON WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	USE SUPPORT	COMMENTS
Virgin River Beaver Dam Wash - Big Bend Wash AZ15010010-003 A&Ww, FC, FBC, AgI, AgL	USGS Fixed Station # 9415000 At Littlefield, Az CMVGR010.18	1998 - 8 partial suites 1999 - 6 partial suites 2000 - 8 partial suites 2001 - 6 partial suites 2002 - 4 partial suites	*Escherichia coli* CFU/100 ml	235 (FBC)	12 - 3000	1 of 16		
			Selenium (total) µg/L	2 (A&Ww chronic)	<1 - 2.2	3 of 27		
			Suspended sediment concentration (SSC) mg/L	80 (A&Ww) (geometric mean)	23 - 18,300	see comment below		
			Turbidity NTU	50 (A&Ww)	0.3 - 360	12 of 24		
	Summary Row A&Ww Not attaining FC Inconclusive FBC Attaining AgI Inconclusive AgL Inconclusive	1998-2002 28 sampling events	*Escherichia coli* CFU/100 ml	235 (FBC)	12 - 3000	1 of 16 (in 1999, 3 years with no exceedances after)	Attaining	USGS collected 28 samples in 1998-2002. Reach was on the 2002 303(d) List due to turbidity. Current turbidity exceedances indicate impairment based on the former turbidity standard. Assessed as "not attaining" and placed on the Planning List until sufficient suspended sediment concentration (SSC) or turbidity data are collected to make an assessment of "attaining" or "impaired." Reach has potential exceedances of the SSC geometric mean standard. Also on the Planning List due to selenium exceedances and missing core parameters: total boron, dissolved metals (cadmium, copper, and zinc), and total metals (mercury, copper, manganese, and lead).
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1 - 2.2	3 of 27 events (11% exceed)	Inconclusive	
			Suspended sediment concentration (SSC) mg/L	80 (A&Ww) (geometric mean)	23 - 18,300	see comment at right	Inconclusive	
			Turbidity NTU	50 (A&Ww)	1 - 360	12 of 24	Not attaining (see comment)	

TABLE 7. COLORADO - GRAND CANYON WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	USE SUPPORT	COMMENTS
LAKES MONITORING DATA								
Dogtown Reservoir AZL15010004-0480 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ and Northern AZ Univ. Lakes Program CMDOG - A (deepest) 100019	1999 - 1 field 2001 - 3 partial suites 2002 - 1 full suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.6 - 8.9 (72 - 140%)	1 of 5		
			pH SU	6.5 - 9.0 (A&Wc, FBC, DWS, AgI, AgL)	7.2 - 9.6	2 of 5		
			Selenium (total) µg/L	2.0 (A&Wc chronic)	< 2 - 3	1 of 4		
			Turbidity NTU	10 (A&Wc)	8 - 75	3 of 4		Naturally occurring erosion of sandstone formations may be the cause of turbidity.
	ADEQ and Northern AZ Univ. Lakes Program CMDOG - BR (boat ramp) 101319	2002 - 1 *Escherichia coli*	OK					
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Inconclusive** **DWS Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1999-2002** **6 samples** **5 sampling events**	**Dissolved oxygen** **mg/L**	**> 7.0** **(90% saturation)** **(A&Wc)**	**6.6 - 8.9** **(72 - 140%)**	**1 of 5**	**Inconclusive**	**ADEQ and Northern Arizona University collected 6 samples in 1999 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to low dissolved oxygen, high pH, and exceedances of selenium standard and the former turbidity standard. Investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed.** **Also placed on the Planning List due to missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).**
			pH **SU**	**6.5 - 9.0** **(A&Wc, FBC, DWS, AgI, AgL)**	**7.2 - 9.6**	**2 of 5**	**Inconclusive**	
			Selenium (total) **µg/L**	**2.0** **(A&Ww chronic)**	**< 2 - 3**	**1 of 4 events (insufficient events)**	**Inconclusive**	
			Turbidity **NTU**	**10** **(A&Wc)**	**8 - 75**	**3 of 4**	**Inconclusive (see comment)**	

TABLE 7. COLORADO - GRAND CANYON WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	USE SUPPORT	COMMENTS
Lake Powell AZL14070006-1130 A&Wc, FC, FBC, DWS, AgI, AgL	Glen Canyon Natl Recreation Area and Bureau of Reclamation Ambient Monitoring Gov't Housing Beach CMPOW - NPS1	1998 - 10 *E. coli* + turbidity 1999 - 11 *E. coli* + turbidity 2000 - 16 *E. coli* + turbidity 2001 - 4 *E. coli* + turbidity 2002 - 10 *E. coli* + turbidity	*Escherichia coli* CFU/100 ml	235 (FBC)	0 - 548	1 of 51		
	Glen Canyon Natl Recreation Area and Bureau of Reclamation Ambient Monitoring Stateline Marina CMPOW - State 1	1999 - 6 *E. coli* + turbidity 2000 - 16 *E. coli* + turbidity 2002 - 8 *E. coli* + turbidity	OK					
	Glen Canyon Natl Recreation Area and Bureau of Reclamation Ambient Monitoring Wahweap Bay Marina CMPOW - WWM1	1998 - 10 *E. coli* + turbidity 1999 - 13 *E. coli* + turbidity 2000 - 18 *E. coli* + turbidity 2001 - 8 *E. coli* + turbidity 2002 - 8 *E. coli* + turbidity	*Escherichia coli* CFU/100 ml	235 (FBC)	0 - 457	1 of 57		
	Glen Canyon Natl Recreation Area and Bureau of Reclamation Ambient Monitoring Picnic Beach CMPOW - WWPB	1998 - 10 *E. coli* + turbidity 1999 - 6 *E. coli* + turbidity 2000 - 8 *E. coli* + turbidity 2002 - 8 *E. coli* + turbidity	OK					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **DWS Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1996 - 1997** **170 samples** **60 sampling events**	***Escherichia coli*** **CFU/100 ml**	**235** **(FBC)**	**0 - 548**	**2 of 170** **(only 1 exceedance in the last 3 years)**	**Inconclusive**	**Bureau of Reclamation and Glen Canyon Natural Recreation Area collected 170 samples at 4 sites in the Arizona portion of Lake Powell.** **Assessed as "inconclusive" due to 1 exceedance of the *Escherichia coli* standard within the last 3 years of monitoring and missing core parameters. Kep[illegible]on the Planning List for further monitoring. (Note, no beach closures in Arizona during the past 5 years.)** **Missing core parameters: dissolved oxygen, turbidity, field pH, total boron, total fluoride, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, arsenic, chromium, lead, manganese, copper, and lead).**

TABLE 8. COLORADO-GRAND CANYON WATERSHED ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
COLORADO-GRAND CANYON WATERSHED – STREAM ASSESSMENTS				
Beaver Dam Wash Utah border - Virgin River 10 miles AZ15010010-009	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient sampling events (no current data).		
Boucher Creek California Wash - Colorado River 4 miles AZ15010002-017	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Chuar Creek wash at 36°11'36"/111°52'17" - Lava Creek 3 miles AZ15010001-024B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 024A. Previous data were collected in 024B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Clear Creek wash at 36°09'12"/111°58'25" - Colorado River 8 miles AZ15010001-025B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 025A. Previous data ware collected in 025B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Colorado River Lake Powell - Paria River 16 miles AZ14070006-001	A&Wc Attaining FC Attaining FBC Attaining DWS Inconclusive AgI Inconclusive AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to missing core parameters: total fluoride and total boron. Remove selenium from the Planning List. No exceedances of the chronic standard in 19 samples.	ADD addSe ✓ +TDS/SSC	
Colorado River Parashant Canyon - Diamond Creek 28 miles AZ15010002-003	A&Wc Not attaining FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 4D – Not attaining	On the Planning List due to: 1. Chronic selenium exceedances in 9 of 43 sampling events (21% exceed). 2. Former turbidity standard exceedances (14 of 30 samples) and potential exceedances of the suspended sediment concentration geometric mean standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 4. Missing core parameters: *Escherichia coli*, total boron, and total metals (mercury, arsenic, manganese, copper, and lead).	Delist turbidity. The standard was repealed in 2002. Assessed turbidity as "not attaining" and placed in category 4D. Turbidity exceedances (14 of 30 samples) indicate impairment based on the former standard. Reach will remain "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." Add turbidity/SSC to the Planning List.	Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration. EPA may also use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.

TABLE 8. COLORADO-GRAND CANYON WATERSHED ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Crystal Creek wash at 36°13'42"/112°11'48" - Colorado River 9 miles AZ15010002-018B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 018A. Previous data were collected in 018B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Deer Creek wash at 36°26'16"/112°28'15.5" - Colorado River 5 miles AZ15010002-019B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 019A. Previous data were collected in 019B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Garden Creek headwaters - Pipe Creek 3 miles AZ15010002-841	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Havasu Canyon Creek Havasupai Indian Reservation - Colorado River 3 miles AZ15010004-001 (previously listed as Havasu Creek)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to: 1. Insufficient monitoring (no current data). 2. Former turbidity standard exceedances. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	Turb	
Hermit Creek Hermit Pack Trail Crossing - Colorado River 4 miles AZ15010002-020B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 020A. Previous data were collected in 020B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Kwagunt Creek tributary at 36°13'29"/111°55'24" - Colorado River 7 miles AZ15010001-031B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 031A. Previous data were collected in 031B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		

TABLE 8. COLORADO-GRAND CANYON WATERSHED ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Monument Creek headwaters - Colorado River 4 miles AZ15010002-845	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Nankoweap Creek tributary at 36°15'30"/111°57'23" - Colorado River 7 miles AZ15010001-033B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 033A. Previous data were collected in 033B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
National Canyon Creek headwaters - Colorado River 3 miles AZ15010002-016	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).	add Pb?	
Paria River Utah border - Colorado River 29 miles AZ14070007-123	A&Ww Impaired FC Attaining FBC Inconclusive Category 5 -- Impaired	On the Planning List due to: 1. Chronic and acute lead exceedance (1 of 45 samples, occurred in 1999). 2. Former turbidity standard exceedances (32 of 43 samples) and potential exceedances of the suspended sediment concentration geometric mean standard. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed.	Add selenium to the 303(d) List due to chronic and acute selenium exceedances (6 of 12 sampling events). OK TURB/SSC	Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration. EPA may also use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Royal Arch Creek headwaters - Colorado River 5 miles AZ15010002-871	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Saddle Canyon Creek tributary at 36°21'35.5"/112°22'46" - Colorado River 5 miles AZ15010002-703B (Reach split into warmwater and coldwater segments since the last assessment. No current data in 703A.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		

TABLE 8. COLORADO-GRAND CANYON WATERSHED ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Shinumo Creek tributary at 36°18'21"/112°18'03" - Colorado River 9 miles AZ15010002-029B (Reach split into warmwater and coldwater segments since the last assessment. No current data in 029A. Previous data were collected in 029B.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Spring Canyon Creek headwaters - Colorado River 6 miles AZ15010002-318	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Tapeats Creek headwaters - Colorado River 13 miles AZ15010002-696	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Three Springs Creek headwaters - Colorado River 1 mile AZ15010002-1180	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Vasey's Paradise (Spring) at Colorado River 0.2 miles AZ15010001-SP01	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. Added in 2002 due to insufficient monitoring (no current data).		
Virgin River Beaver Dam Wash - Big Bend Wash 10 miles AZ15010010-003	A&Ww Not attaining FC Inconclusive FBC Attaining AgI Inconclusive AgL Inconclusive Category 4D -- Not attaining	On the Planning List due to: 1. Chronic selenium exceedances (3 of 27 sampling events). 2. Missing core parameters: total boron, dissolved metals (cadmium, copper, and zinc), and total metals (mercury, manganese, copper, and lead). 3. Former turbidity standard exceedances (12 of 24 samples) and potential exceedances of the suspended sediment concentration geometric mean standard. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed.	Delist fecal coliform. Standards were repealed in 2002. *Escherichia coli* results are supporting designated uses. Delist turbidity. Standard was repealed in 2002. Assessed turbidity as "not attaining" and placed in category 4D. Turbidity exceedances (12 of 24 samples) indicate impairment based on the former standard. Reach will remain "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." Add turbidity/SSC to the Planning List.	Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration. EPA may also use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.

TABLE 8. COLORADO-GRAND CANYON WATERSHED ASSESSMENTS, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
COLORADO-GRAND CANYON WATERSHED – LAKE ASSESSMENTS				
Dogtown Reservoir 70 acres AZL15010004-0480	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 2 – Attaining Some Uses Trophic Status – Eutrophic	On the Planning List due to: 1. Chronic selenium exceedance (1 of 4 sampling events). 2. Low dissolved oxygen (1 of 5 samples). 3. High pH (2 of 5 samples). 4. Missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc). 5. Former turbidity standard exceedances (3 of 4 samples). The causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed.	check TURB/SSC collection dates	
Lake Powell 9,772 acres AZL14070006-1130	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive Trophic status not calculated	On the Planning List due to: 1. *Escherichia coli* exceedance (1 exceedance in the last 3 years). 2. Missing core parameters (only *Escherichia coli* and turbidity data).		

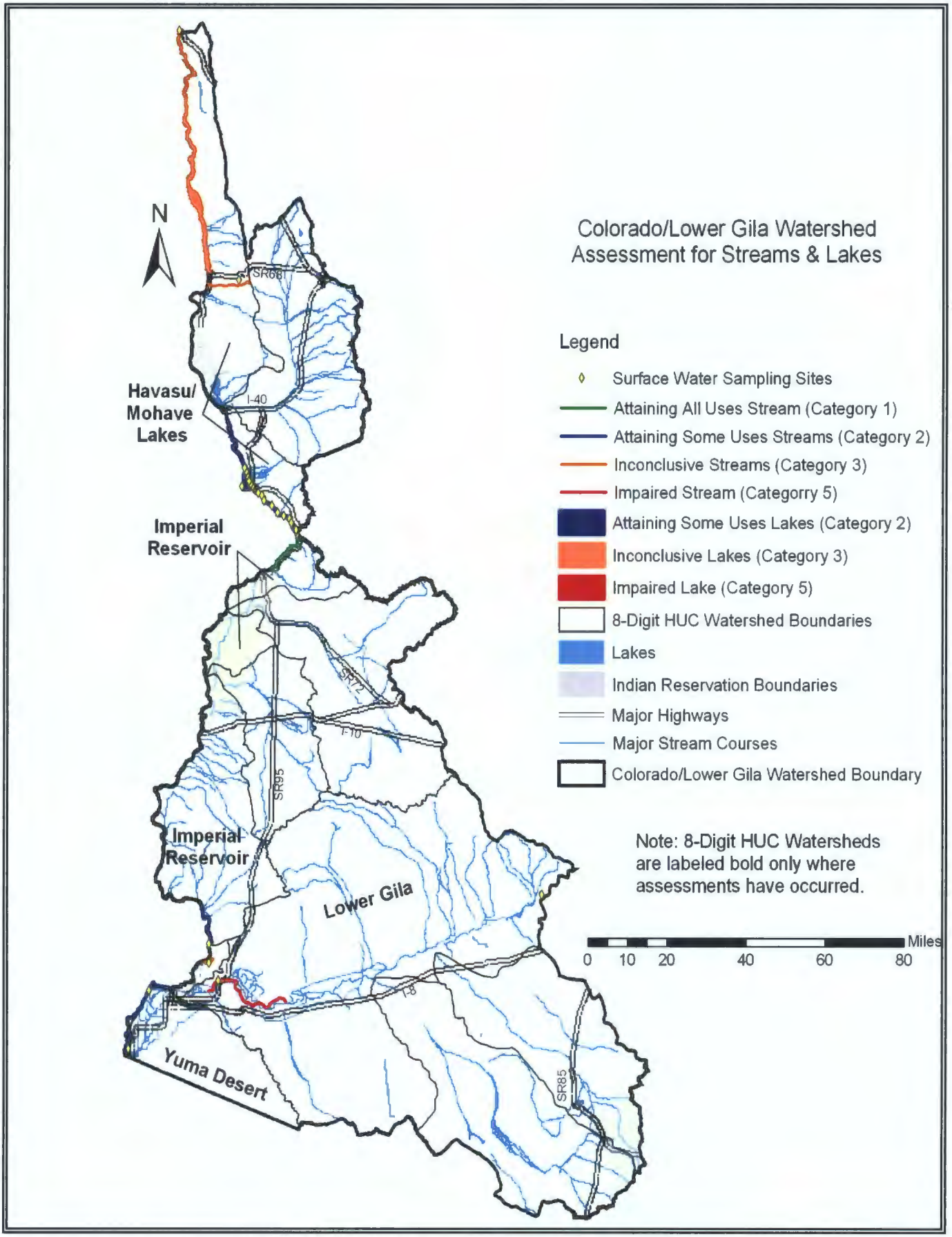


Figure 17. Colorado - Lower Gila Watershed 2004 Monitoring and Assessment Map

TABLE 9. COLORADO - LOWER GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Colorado River Hoover Dam - Lake Mohave AZ15030101-015 A&Wc, FC, FBC, DWS, AgI, AgL	USGS Station 09421500 Below Hoover Dam CMCLR243.26	1998 - 5 partial suites 1999 - 6 partial suites 2000 - 6 partial suites 2001 - 5 partial suites 2002 - 3 partial suites	Dissolved oxygen mg/L	>7.0 (90% saturation) (A&Wc)	6.6 - 9.0 (66 - 91%)	2 of 26		
			Selenium (dissolved) µg/L	2.0 (A&Wc chronic - total)	<2.0 - 3.0	4 of 26		Dissolved selenium data compared to total selenium standards.
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive	**1998-2002** **25 sampling events**	**Dissolved oxygen mg/L**	**>7.0 (90% saturation) (A&Wc)**	**6.6 - 9.0 (66 - 91%)**	**2 of 25**	**Attaining**	**USGS collected 25 samples in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to selenium exceedances and missing core parameters: *Escherichia coli*, total arsenic, total boron, total fluoride, and total metals (chromium, copper, lead, manganese, and mercury).**
			Selenium (dissolved) µg/L	**2.0 (A&Wc chronic - total)**	**<2.0 - 3.0**	**4 of 26 samples 4 of 26 events (16% exceed)**	**Inconclusive**	
Colorado River Bill Williams R. - Osborne Wash AZ15030104-020 A&Ww, FC, FBC, DWS, AgI, AgL	USGS Fixed Station Station #09427520 Below Parker Dam CMCLR127.02	1998 - 6 full suites 1999 - 5 full suites 2000 - 5 full suites 2001 - 4 full suites 2002 - 4 full suites	Selenium (total) µg/L	2.0 (A&Wc chronic)	1.0 - 4.8	1 of 20		Lab reporting limits for 4 other selenium samples were too high to use results for assessment.
	Summary Row A&Ww Attaining FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining	**1998 - 2002** **24 sampling events**	**Selenium (total) µg/L**	**2.0 (A&Wc chronic)**	**1.0 - 4.8**	**1 of 20 events (5% exceed)**	**Attaining**	**USGS collected 24 samples in 1998-2002. Assessed as "attaining all uses."**
Colorado River Indian Wash - Imperial Dam AZ15030107-003 A&Ww, FC, FBC, DWS, AgI, AgL	USGS Fixed Station Station #09429490 Above Imperial Dam CMCLR029.79 100752	1998 - 5 partial suites 1999 - 5 partial suites 2000 - 6 partial suites 2001 - 2 partial suites 2002 - 4 full suites	Suspended sediment concentration mg/L	80 (geo mean) (A&Ww)	8 - 559	see comment at right		Geometric mean of samples in 1998 was 96. The geometric mean was not exceeded in the other 4 years.
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining	**1998 - 2002** **22 sampling events**	**Suspended sediment concentration mg/L**	**80 (geo mean) (A&Ww)**	**8 - 559**	**see comment at right**	**Inconclusive**	**US Geological Survey collected 22 samples in 1998-2002. Assessed as "attaining some uses" due to potential exceedances of the SSC geometric mean standard.**

TABLE 9. COLORADO - LOWER GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Colorado River Main Canal - Mexico border AZ15030107-001 A&Ww, FC, FBC, DWS, AgI, AgL	USGS Fixed Station Station #09522000 At Mexico boundary Upstream of Morelos Dam CMCLR015.85 100744	1998 - 5 full suites 1999 - 3 full + 2 partial suites 2000 - 5 full + 2 partial suites 2001 - 4 full + 2 partial suites 2002 - 4 full + 2 partial suites	DDE µg/L	0.001 (FC, AgI, AgL)	<0.006 - 0.476	1 of 23		
				0.02 (A&Ww chronic)		1 of 23		
				0.1 (DWS)		1 of 23		
			Dieldrin µg/L	0.002 (A&Ww chronic & DWS)	<0.001 - 0.630	1 of 23		
				0.0001 (FC)		1 of 23		
				0.09 (FBC)		1 of 23		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	5.0 - 11.0 (63 - 105%)	4 of 29		
			Hexachlorocyclo-hexane alpha (BHC) µg/L	0.006 (DWS)	<0.002 - 0.617	1 of 23		
				0.01 (FC)		1 of 23		
				0.22 (FBC)		1 of 23		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	1.0 - 3.0	1 of 21		
			Suspended sediment concentration mg/L	80 (geo mean) (A&Ww)	5.0 - 398	see comment below		
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining	1998 - 2002 29 sampling events	DDE µg/L	0.001 (FC, AgI, AgL)	<0.006 - 0.476	1 of 23	Attaining	USGS collected 29 samples in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to potential exceedances of the SSC geometric mean standard.
				0.02 (A&Ww chronic)	<0.006 - 0.476	1 of 23 events (4% exceed)	Attaining	
				0.1 (DWS)	<0.006 - 0.476	1 of 23	Attaining	
			Dieldrin µg/L	0.002 (A&Ww chronic & DWS)	<0.001 - 0.630	1 of 23 events (4% exceed)	Attaining	

TABLE 9. COLORADO - LOWER GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
				0.0001 (FC)	<0.001 - 0.630	1 of 23	Attaining	
				0.09 (FBC)	<0.001 - 0.630	1 of 23	Attaining	
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	5.0 - 11.0 (63 - 105%)	4 of 29	Attaining	
			BHC µg/L	0.006 (DWS)	<0.002 - 0.617	1 of 23	Attaining	
				0.01 (FC)	<0.002 - 0.617	1 of 23	Attaining	
				0.22 (FBC)	<0.002 - 0.617	1 of 23	Attaining	
			Selenium (total) µg/L	2.0 (A&Ww chronic)	1.0 - 3.0	1 of 21 events (5% exceed)	Attaining	
			Suspended sediment concentration mg/L	80 (geo mean) (A&Ww)	5.0 - 398	see comment above right	Inconclusive	
Colorado River, unnamed tributary at Thumb Butte headwaters - Colorado River AZ15030101-560 A&We, PBC	USGS Near Thumb Butte CMUW1009.90 101598	2001 - 1 partial suite	No exceedances					
	Summary Row A&We Inconclusive PBC Inconclusive	2001 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Gila River Coyote Wash - Fortuna Wash AZ15070201-003 A&Ww, FC, FBC, AgI, AgL	ADEQ and USGS Fixed Station Near Dome, USGS #09520500 LGGLR005.76 100455	1998 - 4 full suites 1999 - 5 full suites 2000 - 4 full suites 2001 - 4 full suites 2002 - 3 full suites	Boron (total) µg/L	1000 (AgI)	100 - 1500	5 of 20		
			Dissolved oxygen mg/L	6.0 (90% saturation) (AW&w)	3.2 - 11.8 (40 - 114%)	3 of 18		Two of the dissolved oxygen exceedances occurred during low flow conditions.
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<5 - 9.2	5 of 20		

TABLE 9. COLORADO - LOWER GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Attaining FBC Attaining AgI Impaired AgL Attaining	1998-2002 20 sampling events	Boron (total) µg/L	1000 (AgI)	100 - 1500	5 of 20	Impaired	ADEQ collected 20 samples in 1998-2002. Assessed as "impaired" due to boron and selenium exceedances.
			Dissolved oxygen mg/L	6.0 (90% saturation) (A&Ww)	3.2 - 11.8 (40 - 114%)	3 of 18	Attaining	
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<5 - 9.2	5 of 20 events (25% exceed)	Impaired	
LAKES MONITORING DATA								
Hunter's Hole (Colorado River backwater) AZL15030108-0660 A&Ww, FC, FBC, AgL	AGFD Ambient Monitoring CMHUN	2000 - 1 partial suite	Selenium (total) µg/L	20 (A&Ww acute)	<5 - 22	1 of 1		Lab reporting limits for 4 other selenium samples were too high to use results for assessment. Missing core parameters: dissolved oxygen, *Escherichia coli*, dissolved metals (cadmium, copper, and zinc), field pH, and total metals (copper and lead).
				2.0 (A&Ww chronic)	<5 - 22	1 of 1		
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2000 1 sampling event	Selenium (total) µg/L	20 (A&Ww acute)	<5 - 22	1 of 1 event (in 2000)	Inconclusive	Insufficient monitoring data to assess. Placed on the Planning List due to selenium exceedance.
				2 (A&Ww chronic)	<5 - 22	1 of 1 event (insufficient events)	Inconclusive	
Lake Havasu AZL15030101-0590 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Lakes Program Dam Site, Parker Dam CMHAV-A 100098	1998 - 1 partial suite 2000 - 1 partial suite 2001 - 3 full suites 2002 - 1 partial suite	Selenium (total) µg/L	2.0 (A&Ww chronic)	<0.002 - 4	1 of 7		
	ADEQ Lakes Program CMHAV-B 100102	1998 - 1 full suite 2000 - 2 full suites 2001 - 4 full suites 2002 - 1 full suite	Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.5 - 0.8	1 of 1		
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	1 of 8		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2 - 3	1 of 5		
	ADEQ Lakes Program CMHAV-C 100099	1998 - 1 full suite 2001 - 4 full suites 2002 - 1 full suite	Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.5 - 0.7	1 of 1		Laboratory reporting limit for 3 other selenium samples was too high to use results for assessment. Dissolved selenium data compared to total selenium standard.
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.7	1 of 6		
			Selenium (dissolved) µg/L	2.0 (A&Ww chronic - total)	<2 - 3	1 of 4		

TABLE 9. COLORADO - LOWER GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Lakes Program Colorado River CMHAV-CRA 100101	1998 - 1 full suite 2000 - 2 full suites 2001 - 2 full suites 2002 - 1 full suite	No exceedances					
	ADEQ Lakes Program Marina CMHAV-MARA 100167	2000 - 1 full suite 2001 - 1 full suite	No exceedances					
	Mohave County Health Dept 13 sites: Body Beach Cattail Cove Crazy Horse Beach London Bridge, East Beach London Bridge, West Beach Nautical Inn Beach Rotary Beach, North Rotary Beach, South Sandpoint Marina South Channel Up River Windsor #4 Windsor Cove	2000 - 27 *E. coli* 2001 - 18 *E. coli* 2002 - 15 *E. coli*	Escherichia coli CFU	235 (FBC)	<1 - 2419	1 of 60 sampling events (occurred at Nautical Inn Beach in 2000)		Nautical Inn Beach is located in Thompson Bay.
	Mohave County Health Dept 13 sites: Bass Bay Bighorn Point Friendly Island Frog Point Partners Point Pilot Rock Rocky landing Satellite Cove Solitude Cove Standard Wash Cove Steamboat Cove Three Dunes Cove Wren Cove	2000 - 6 *E. coli* 2001 - 2 *E. coli* 2002 - 4 *E. coli*	Escherichia coli CFU	235 (FBC)	<1 - 501	2 of 12 sampling events 1 at Bass Bay (368 CFU) in 2000 1 at Standard Wash Cove (501 CFU) in 2002		Bass Bay is approximately 10 miles south of Thompson Bay. Standard Wash Cove is approximately 6 miles south of Thompson Bay.
	Mohave County Health Dept North Channel	2001 - 18 *E. coli* 2002 - 15 *E. coli*						

TABLE 9. COLORADO - LOWER GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining	1998 - 2002 1077 samples	*Escherichia coli* CFU/100ml	235 FBC	<1 - 2419	3 sites with 1 exceedance: 1 of 60 events 1 of 12 events 1 of 12 events	Inconclusive	ADEQ collected 108 samples at 33 sites in 1998-2002. Field and *Escherichia coli* samples only were collected at 28 of the 33 sites. These 28 sites are not shown in this table. No exceedances were found. Mohave County also collected 969 *Escherichia coli* samples at 27 sites. Assessed as "attaining some uses" and placed on the Planning List due to mercury, selenium, and *Escherichia coli* exceedances. *Escherichia coli* exceedances were not combined because single exceedances occurred at widely separated beaches (at least 5 miles apart).
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.5 - 0.8	2 of 12 samples 1 of 4 events (insufficient events)	Inconclusive	
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	2 of 27	Attaining	
			Selenium (total) µg/L	2 (A&Ww chronic)	<2 - 3	3 of 24 samples 1 of 7 events (insufficient events)	Inconclusive	
Mittry Lake AZ15030107-0950 A&w, FC, FBC	ADEQ Lakes Program CMMIT-A 101352	2002 - 1 partial suite	No exceedances					
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive	2002 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Painted Rock Borrow Pit Lake AZL15070201-1010 A&Ww, FC, FBC, AgI, AgL	USFWS Routine Monitoring LGPRL	1999 - 5 partial suites 2000 - 1 full + 2 partial suites 2001 - 1 full suite 2002 - 0 (Dry)	Ammonia mg/L	varies with pH and temperature (A&Ww chronic)	0.4 - 0.68	1 of 7		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	1.8 - 13.8	5 of 8		
			pH (high) SU	6.5-9.0 (A&Ww, FBC, AgI, AgL)	7.1 - 9.8	1 of 8		

TABLE 9. COLORADO - LOWER GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Impaired FBC Inconclusive AgI Inconclusive AgL Inconclusive	1999 - 2002 9 sampling events	Ammonia mg/L	varies with pH and temperature (A&Ww chronic)	0.4 - 0.68	1 of 7 samples 1 of 7 events (14% exceed)	Inconclusive	USFWS collected 9 samples in 1999-2002. Assessed as "impaired" due to pesticides in fish tissue and low dissolved oxygen. EPA placed this lake on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue lead to a fish consumption advisory. Once listed, the lake cannot be delisted until a TMDL is complete or sufficient data are collected to indicate these parameters are no longer a concern in fish tissue (fish consumption advisory is removed). On the 303(d) List since 1992 for low dissolved oxygen. Although current dissolved oxygen data are inconclusive, the lake cannot be delisted until a TMDL is complete or dissolved oxygen data indicate designated uses are being attained. Placed on the Planning List due to exceedances of ammonia and pH standards and missing core parameters: total boron, *Escherichia coli*, dissolved metals (cadmium, copper, and zinc), and total metals (mercury, manganese, copper, and lead). Note that the lake was dry in 2002.
			Dissolved oxygen mg/L	6.0 (90% saturation) (A&Ww)	1.8 - 13.8	5 of 8	Inconclusive (Impaired)	
			pH (high) SU	6.5-9.0 (A&Ww, FBC, AgI, AgL)	7.1 - 9.8	1 of 8	Inconclusive	

Table 10. COLORADO-LOWER GILA WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
COLORADO-LOWER GILA WATERSHED – STREAM ASSESSMENTS				
Colorado River Hoover Dam - Lake Mohave 40 miles AZ15030101-015	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive	On the Planning List due to: 1. Chronic selenium exceedances (4 of 26 sampling events, 16% exceed). 2. Missing core parameters: *Escherichia coli*, total arsenic, total boron, total fluoride, and total metals (chromium, copper, lead, manganese, and mercury).		
Colorado River Bill Williams River - Osborne Wash 13 miles AZ15030104-020	A&Ww Attaining FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 1 -- Attaining All Uses			
Colorado River Indian Wash - Imperial Dam 18 miles AZ15030104-001	A&Ww Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to potential exceedances of the suspended sediment concentration (SSC) geometric mean standard. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed.		Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration.
Colorado River Main Canal - Mexico border 32 miles AZ15030107-001	A&Ww Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 1 -- Attaining All Uses	On the Planning List due to potential exceedances of the suspended sediment concentration (SSC) geometric mean standard. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed.		Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration.
Colorado River, unnamed tributary near Thumb Butte headwaters - Colorado River 11 miles AZ15030101-560	A&We Inconclusive PBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Gila River Coyote Wash - Fortuna Wash 28 miles AZ15070201-003	A&Ww Impaired FC Attaining FBC Attaining AgI Impaired AgL Attaining Category 5 – Impaired		Add boron to the 303(d) List. Boron exceedances in 5 of 20 samples. Add selenium to the 303(d) List. Chronic selenium exceedances in 5 of 20 sampling events (25% exceed).	

Table 10. COLORADO-LOWER GILA WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
COLORADO-LOWER GILA WATERSHED – LAKE ASSESSMENTS				
Hunter's Hole 17 acres AZL15030108-0660	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive Trophic status not calculated	On the Planning List due to: 1. Insufficient monitoring data to assess (only 1 sample). 2. Acute and chronic selenium exceedance (1 of 1 sampling event).		
Lake Havasu 16,122 acres AZL15030101-0590	A&Ww Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic status -- Oligotrophic	On the Planning List due to: 1. Chronic mercury exceedance (1 of 4 sampling events). 2. Chronic selenium exceedance (1 of 7 sampling events). 3. *Escherichia coli* exceedances (1 exceedance at 3 sites). (Note that the *Escherichia coli* exceedances are being assessed separately because the monitoring sites with exceedances were approximately 5 miles apart on the lake. Only 1 exceedance in the last 3 years at any site.)		
Lake Mohave 12,850 acres AZL15030101-0960	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed) Trophic status -- Oligotrophic	On the Planning List. Added in 2002 due to missing core parameters (no current monitoring data).		
Mittry Lake 384 acres AZL15030107-0950	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed) Trophic status not calculated	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		

Table 10. COLORADO-LOWER GILA WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Painted Rock Borrow Pit Lake 186 acres AZL15070201-1010	A&Ww Impaired FC Impaired FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 – Impaired Trophic status not calculated	On the Planning List due to: 1. Chronic ammonia exceedance (1 of 7 sampling events). 2. pH exceedance (1 of 8 samples). 3. Missing core parameters: total boron, *Escherichia coli*, total metals (mercury, manganese, lead, and copper), and dissolved metals (copper, cadmium, and zinc).	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation policy before the state may use narrative information in a listing decision, but once listed, the lake cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (e.g., fish consumption advisory removed). ADEQ is currently collecting fish tissue data in support of completing a TMDL. On the 303(d) List since 1992 for low dissolved oxygen. Although current dissolved oxygen data are inconclusive, the reach cannot be delisted until a TMDL is complete or dissolved oxygen data indicate that designated uses are being attained. Delist fecal coliform. Standard was repealed in 2002. Placed on the Planning List for *Escherichia coli* monitoring.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to assess standards; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.

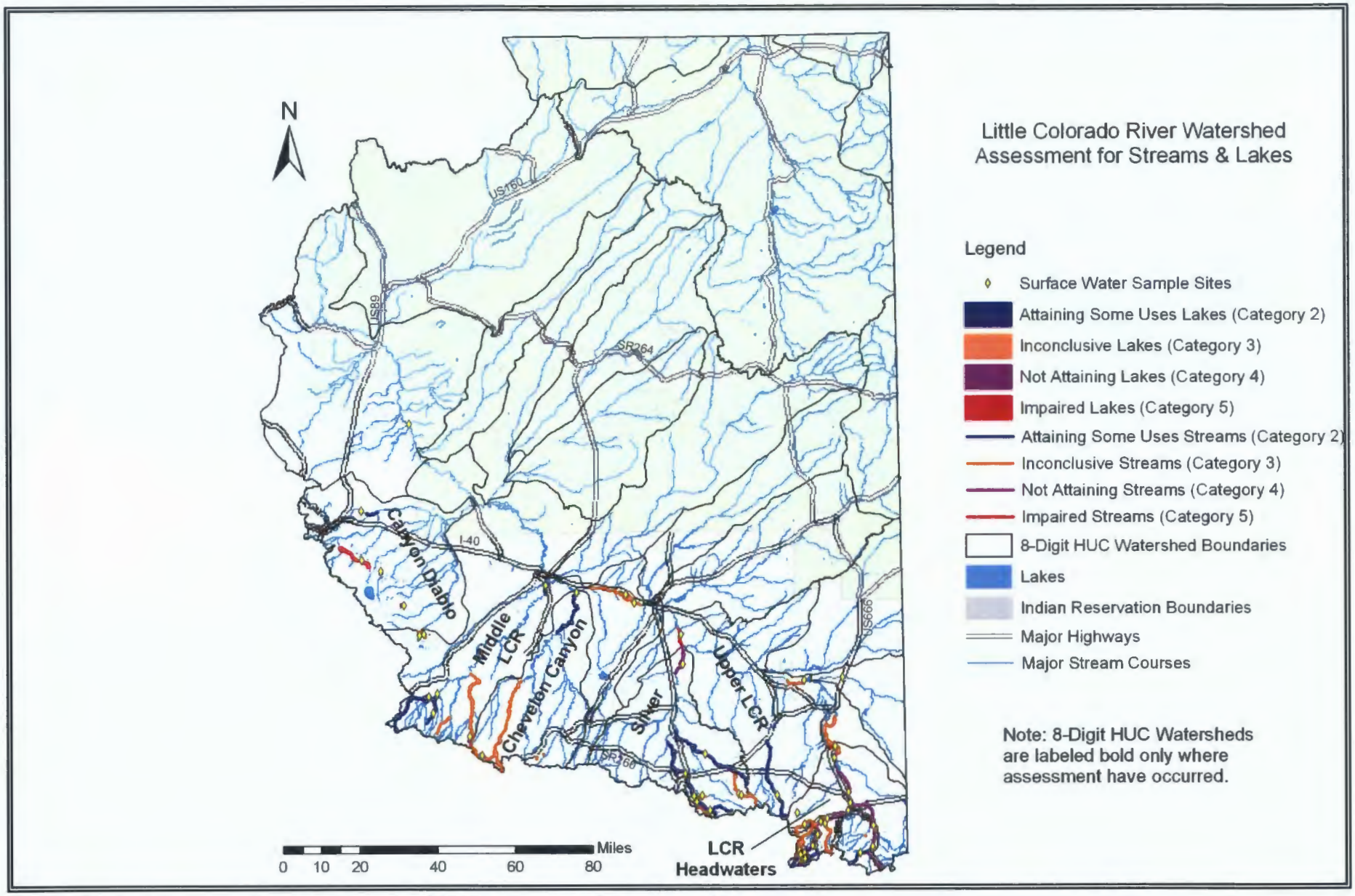


Figure 18. Little Colorado - San Juan Watershed 2004 Monitoring and Assessment Map

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Barbershop Canyon Creek headwaters - East Clear Creek AZ15020008-537 A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring At Merrit Draw LCBRB003.84 100410	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	>7.0 (90% saturation) (A&Ww)	6.5 - 10.00 (88 - 97%)	1 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment. Lab reporting limits for copper were too high to use results for assessment.
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgL Attaining**	**2000-2001** **4 samples**	**No exceedances**					**ADEQ collected 4 samples in2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameter: dissolved copper.**
Billy Creek headwaters - Show Low Creek AZ15020005-019 A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring At Pinetop LCBIL003.86 100946	2000 - 1 full suite 2001 - 3 full suites	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - 420	1 of 4		Lab reporting limits for copper were too high to use results for assessment.
			Turbidity NTU	10 (A&Wc)	5 - 16	1 of 2		
	ADEQ Ambient Monitoring Above Porter Creek LCBil000.03 100947	2000 - 1 full suite 2001 - 3 full suites	Turbidity NTU	10 (A&Wc)	4 - 28	3 of 4		
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Inconclusive** **AgL Attaining**	**2000-2001** **8 samples** **4 sampling events**	***Escherichia coli*** **CFU/100ml**	**235** **(FBC)**	**<2 - 420**	**1 of 4 events (in 2000)**	**Inconclusive**	**ADEQ collected 8 samples at 2 sites in 2000-2001. Asessed as "attaining some uses" and placed on the Planning List due to exceedence of *Escherichia coli* and the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.** **Also on the Planning List due to missing core parameter: dissolved copper.**
			Turbidity **NTU**	**10** **(A&Wc)**	**4 - 28**	**4 of 8**	**Inconclusive (see comment)**	
Brown Creek headwaters - Silver Creek AZ15020005-016 A&Wc, FC, FBC (tributery rule)	ADEQ Ambient Monitoring Outside of exclosures LCRBRO009.99 101241	2001 -1 full suite	No exceedances					Lab reporting limits for copper were too high to use results for assessment.
	ADEQ Ambient Monitoring Below Brown Spring- within cattle exclosure LCBRO0010.4 101242	2001 - 1 full suite	No exceedances					

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2001 2 samples 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Chevelon Creek Black Canyon - Little Colorado River AZ15020005-001 A&Wc, FC, FBC, AgL, Agl	ADEQ Ambient Monitoring Below diversion dam near Winslow LCCHC000.69 100341	2001 - 1 full suite 2002 - 3 full suites	Turbidity NTU	10 (A&Wc)	12 - 34	4 of 4		
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining Agl Attaining AgL Attaining	2001 - 2002 4 sampling events	Turbidity NTU	10 (A&Wc)	12 - 34	4 of 4	Inconclusive (see comment)	ADEQ collected 4 samples in 2001- 2002. Assessed as "attaining some uses" and placed on the Planning List dua to exceedances of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
Colter Creek headwaters - Nutrioso Creek AZ15020001-293 A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring Near Nutrioso LCCHC001.94 100935	2001 - 1 full suite 2002 - 3 full suites	No exceedances					Lab reporting limits for copper were too high to use results for assessment.
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining AgL Attaining	2001 -2002 4 sampling events	No exceedances					ADEQ collected 4 samples in 2001-2002. Assessed as "attaining some uses" and placed on the Planning list due to missing core parameter: dissolved copper.
East Clear Creek headwaters - Yeager Canyon AZ15020008-009 A&Wc, FC, FBC, AgL, Agl	ADEQ Ambient Monitoring Above Yeager Canyon LCECL007.86 100537	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.4 - 10.5 (72 - 91%)	2 of 4		Lab reporting limits for copper were too high to use results for assessment.
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining Agl Attaining AgL Attaining	2000 - 2001 4 samples 4 sample events	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.4 - 10.5 (72 - 91%)	2 of 4	Inconclusive	ADEQ collected 4 samples in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to low dissolved oxygen and missing core parameter: dissolved copper.
Fish Creek headwaters - Little Colorado River AZ15020001-211 A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring upstream FS Road #118 LCFIS001.97 101244	2001 - 1 full suite	Mercury (dissolved) µg/L	0.01 (A&Wc chronic)	0.8	1 of 1		Lab reporting limits for copper samples were too high to use results for assessment. Dissolved mercury data to compared to total mercury standard. Missing core parameter: dissolved copper.
				0.6 (FC)		1 of 1		

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2001 1 sampling event	Mercury (dissolved) µg/L	0.01 (A&Wc chronic)	0.8	1 of 1 event (insufficient events)	Inconclusive	Insufficient monitoring data to assess. Placed on the Planning List due to mercury exceedance.
				0.6 (FC)		1 of 1	Inconclusive	
Hall Creek headwaters - Little Colorado River AZ15020001-012 A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Below wilderness area and above Highway 273 LCHAL007.00 101263	2001 - 1 full suite	Dissolved oxygen mg/L	>7.0 (A&Wc)	6.5	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment. Missing core parameters: dissolved metals (copper, cadmium, and zinc). Lab reporting limits for dissolved metals were too high to use results for assessment.
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive	2000-2001 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Lee Valley Creek Lee Valley Reservoir - East Fork of Little Colorado River AZ15020001-232B A&Wc, FBC, FC, AGL	ADEQ Ambient Monitoring Above wilderness boundary LCLVL00.85 101243	2001 - 1 full suite	No exceedances					Missing core parameters: dissolved metals (copper, cadmium, and zinc). Lab reporting limits for dissolved metals were too high to use results for assessment.
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2001 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Little Colorado River West Fork Little Colorado - Water Canyon AZ15020001-011 A&Wc, FC, FBC, AgI, AgL	Town of Eager "Big Ditch" Project Site 1 - At South Fork of LCR LCLCR174.81	2001 - 3 field 2002 - 12 field	Turbidity NTU	10 (A&Wc)	3 - 18	2 of 15		Lab reporting limits for dissolved copper and cadmium were too high to use results for assessment.
	Town of Eager "Big Ditch" Project Site 2 - At golf course LCLCR174.26	2001 - 3 field 2002 - 12 field	Turbidity NTU	10 (A&Wc)	5 - 29	3 of 15		
	ADEQ Ambient Monitoring Below South Fork of LCR LCLCR173.85 100581	2000 - 1 full suite 2001 - 3 full suites	Turbidity NTU	10 (A&Wc)	6 - 21	1 of 4		
	ADEQ Ambient Monitoring Above South Fork of LCR LCLCR173.84 100580	1998 - 1 partial suite	No exceedances					

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Town of Eager "Big Ditch" Project Site 3 - At State Route 60 Port of Entry LCLCR172.98	2001 - 3 field 2002 - 12 field	Turbidity NTU	10 (A&Wc)	9 - 33	12 of 15		
			Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.4 - 12.4	1 of 15		
	Summary Row A&Wc Not attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998 - 2002 50 samples 20 sampling events	Turbidity NTU	10 (A&Wc)	3 - 21	18 of 50	Not attaining	The Town of Eager collected 45 field samples, and ADEQ collected 5 samples from 1998-2002. A turbidity TMDL was completed for the Little Colorado River in 2002. Assessed as "not attaining" due to turbidity and placed on the Planning List for TMDL follow-up monitoring and missing core parameters: dissolved metals (copper and cadmium).
			Dissolved oxygen mg/L	> 7.0 (A&Wc)	6.4 - 12.4	1 of 50	Attaining	
Little Colorado River Nutrioso Creek - Carnero Wash AZ15020001-009 A&Wc, FC, FBC, AgI, AgL	ADEQ Fixed Station Network Below Springerville WWTP LCLCR172.60 100331	1999 - 3 full + 1 partial suite 2000 - 4 full suites 2001 - 4 full suites 2002 - 1 full suite	*Escherichia coli* CFU/100 ml	235 (FBC)	260	1 of 12		
			Turbidity NTU	10 (A&Wc)	5 - 24	9 of 12		
	Summary Row A&Wc Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1999-2000 13 sampling events	*Escherichia coli* CFU/100 ml	235 (FBC)	260	1 of 12 events (in 2000)	Inconclusive	ADEQ collected 13 samples in 1999-2000. A turbidity TMDL was completed for the Little Colorado River in 2002. Assessed as "not attaining" due to exceedances of the former turbidity standard and placed on the Planning List for TMDL follow-up monitoring. Also placed on the Planning List due to *Escherichia coli* exceedance.
			Turbidity NTU	10 (A&Wc)	5 - 24	9 of 12	Not attaining	
Little Colorado River unnamed reach (15020001-021) to Lyman Lake AZ15020001-005 A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Above Lyman Lake LCLCR161.69 101174	2000 - 1 full suite 2001 - 3 full suites	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - 354	1 of 3		
			Turbidity NTU	10 (A&Wc)	18 - 481	3 of 3		
	Summary Row A&Wc Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	2000-2001 4 sampling events	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - 354	1 of 3 events (in 2001)	Inconclusive	ADEQ collected 4 samples in 2000-2001. A turbidity TMDL was completed for the Little Colorado River in 2002. Assessed as "not attaining" due to exceedances of the former turbidity standard and placed on the Planning List for *Escherichia coli* exceedance and TMDL follow-up monitoring.
			Turbidity NTU	10 (A&Wc)	18 - 481	3 of 3	Not attaining	

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Little Colorado River HUC 15020001 boundary - unnamed tributary (AZ15020002-025) AZ15020002-024 A&Wc, FC, FBC, DWS, AgI, AgL	AGFD Routine Monitoring At Weinema Bridge LCLCR158.36	1999 - 1 partial suite 2000 - 1 partial suite	No exceedances					Missing core parameters: turbidity/SSC, *Escherichia coli*, total boron, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, arsenic, and chromium).
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive	**2000** **2 sampling events**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Little Colorado River Silver Creek - Carr Wash AZ15020002-004 A&Wc, FC, FBC, DWS, AgI, AgL why don't these stds apply?	USGS & ADEQ Fixed Station Near Woodruff LCLCR120.11 100334	1998 - 1 partial suite 1999 - 1 full + 3 partial suites 2000 - 3 full + 1 partial suite 2001 - 4 full suites 2002 - 1 full + 1 partial suite	Arsenic (total) µg/L	50 (DWS, FBC)	<10 - 67	1 of 11		
			Barium (total) µg/L	2000 (DWS)	180 - 7,700	2 of 10		
			Beryllium (total) µg/L	4 (DWS)	<0.5 - 43	2 of 12		
			Chromium (total) µg/L	100 (DWS)	<10 - 120	1 of 12		
			Dissolved oxygen mg/L	>7 (90% saturation) (A&Wc)	6.3 - 10.2 (81 - 105%)	1 of 11		
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 57,000	2 of 9 (2 in last 3-year period)		
			Lead (total) µg/L	15 (DWS, FBC)	<5 - 290	3 of 12		
				100 (AgL)		2 of 12		
			Manganese (total) µg/L	980 (DWS)	<50 - 9,800	2 of 12		
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.97	1 of 12		
			Nickel (total) µg/L	140 (DWS)	<100 - 210	1 of 10		
			Suspended sediment conc. (SSC) mg/L	80 (geometric mean) (A&Wc)	248	1 of 1 sample		Insufficient data to calculate a geometric mean. Need a minimum of 4 samples. Not included in the final assessment.
			Turbidity NTU	10 (A&Wc)	54 - >1000	8 of 8		

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Not attaining FC Attaining FBC Impaired DWS Inconclusive AgI Attaining AgL Attaining	1998-2002 15 samples 15 sampling events	Arsenic (total) µg/L	50 (DWS, FBC)	<10 - 67	1 of 11	Attaining	ADEQ and USGS collected 19 samples in 1998-2002. Assessed as "impaired" due to *Escherichia coli* exceedances. Assessed as "not attaining" due to turbidity exceedances (see comment in Table 14 to follow). Placed on the Planning List due to exceedances of the: 1. Lead standard and 2. Former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
			Barium (total) µg/L	2000 (DWS)	180 - 7,700	2 of 10	Attaining	
			Beryllium (total) µg/L	4 (DWS)	<0.5 - 43	2 of 12	Attaining	
			Chromium (total) µg/L	100 (DWS)	<10 - 120	1 of 12	Attaining	
			Dissolved oxygen mg/L	> 7 (90% saturation) (A&Wc)	8.3 - 10.2 (81 - 105%)	1 of 11	Attaining	
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 57,000	2 of 9 events (in 2000 and 2001)	Impaired	
			Lead (total) µg/L	15 (DWS, FBC)	<5 - 290	3 of 12	Inconclusive	
				100 (AgL)	<5 - 371	2 of 12	Attaining	
			Manganese (total) µg/L	980 (DWS)	<50 - 9,800	2 of 12	Attaining	
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.97	1 of 12	Attaining	
			Nickel (total) µg/L	140 (DWS)	<100 - 210	1 of 10	Attaining	
			Turbidity NTU	10 (A&Wc)	54 - >1000	8 of 8	Inconclusive (Not attaining)	
Little Colorado River Zion Reservoir - Concho Creek AZ15020002-016 A&Wc, FBC, FC, DWS, AgI, AgL	USGS Fixed Station Near St. Johns #09386100 LCLCR143.39 101459	1999 - 5 SSC events 2000 - 9 SSC events 2001 - 5 SSC events 2002 - 3 SSC events	Suspended sediment concentration (SSC) mg/L	80 (geometric mean) (A&Wc)	8 - 2180	see comment below		
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive	1999-2002 39 samples 22 sampling events	Suspended sediment concentration (SSC) mg/L	80 (geometric mean) (A&Wc)	8 - 2180	see comment at right	Inconclusive	USGS collected 39 SSC samples during 22 sampling events in 1999-2002. Assessed as "inconclusive" and placed on the Planning List due to potential exceedances of the SSC geometric mean standard. Also on the Planning List due to missing core parameters: all except SSC.

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Little Colorado River Porter Tank Draw - McDonalds Wash AZ15020008-017 A&Ww, FBC, FC, DWS, AgI, AgL	USGS Fixed Station Near Joseph City #09397300 LCLCR108.60 101480	1998 - 8 SSC events 1999 - 6 SSC events 2000 - 3 SSC events 2001 - 8 SSC events 2002 - 2 SSC events	Suspended sediment conc. (SSC) mg/L	80 (geometric mean) (A&Wc)	146 - 515,000	see comment at right		
	Summary Row **A&Ww Impaired[a]** **FC Inconclusive** **FBC Inconclusive** **DWS Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1998-2002** **93 samples** **27 sampling events**	**Suspended sediment concentration (SSC)** **mg/L**	**80** **(geometric mean)** **(A&Wc)**	**146 - 515,000**	**see comment at right**	**Inconclusive**	**USGS collected 93 SSC samples during 27 sampling events in 1998-2002.[a]** **Reach was on the 2002 303(d) List due to past copper and silver exceedances (no current data). Assessed as "impaired" due to copper and silver.** **Placed on the Planning List due to potential exceedances of the SSC geometric mean standard and missing core parameters: all missing except SSC.**
Little Colorado River, East Fork headwaters - Hall Creek AZ15020001-230 A&Wc, FBC, FC, AGL	ADEQ Ambient Monitoring Neer Greer LCELR000.92 100948	2000 - 1 full suite 2001 - 3 full suites	No exceedances					Lab reporting limits for dissolved copper and cadmium were too high to assess the chronic standard.
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgL Attaining**	**2000-2001** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (copper and cadmium).**
Little Colorado River, South Fork headwaters - Little Colorado R. AZ15020001-027 A&Wc, FC, FBC, AgL	ADEQ Biocriteria Program At S. Fork Campground LCSLR001.29 100644	1998 - 1 partial suite	No exceedances					Missing core parameters: *Escherichia coli*, dissolved metals (copper and zinc), and total metals (mercury, copper, and lead). Lab reporting limits for dissolved copper were too high to use results for assessment.
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Little Colorado River, West Fork headwaters - Gov't Springs AZ15020001-013A A&Wc, FC, FBC Unique Water	ADEQ Biocriteria Program Mount Baldy Wilderness LCWLR004.09 100694	1998 - 1 partial suite	No exceedances					Lab reporting limits for dissolved copper and cadmium were too high to use results for assessment.
	ADEQ Ambient Monitoring Below Sheep's Crossing LCWLR003.30 100945	2000 - 1 partial suite 2001 - 2 full suites 2002 - 1 full suite	No exceedances					
	ADEQ Biocriteria Program Above Government Springs LCWLR001.08 100695	1998 - 1 partial suite	No exceedances					

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining**	**1998-2002** **6 samples** **5 sampling event**	**No exceedances**					**ADEQ collected 6 samples at 3 sites in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (copper and cadmium).**
Little Colorado River, West Fork Gov't Springs - Little Colorado AZ15020001-013B A&Wc, FC, FBC, AgL	ADEQ Fixed Station Network At Government Springs LCWLR000.78 100328	1999 - 4 full suites 2000 - 4 full suites 2001 - 4 full suites 2002 - 1 full suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.3 - 10.7 (82 - 116%)	2 of 11		Low dissolved oxygen due to naturally occurring ground water upwelling (at spring), and not anthropogenic causes. Not included in final assessment. Lab reporting limits for 12 other copper and cadmium samples were too high to use results for assessments.
			Copper (dissolved) µg/L	varies by hardness (A&Wc chronic)	<10 - 13	1 of 1		
				varies by hardness (A&Wc acute)	<10 - 13	1 of 1		
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1999-2002** **13 sampling events**	**Copper (dissolved)** **µg/L**	**varies by hardness** **(A&Wc chronic)**	**<10 - 13**	**1 of 1 event** **(insufficient events)**	**Inconclusive**	**ADEQ collected 13 samples in 1999-2002. Assessed as "attaining some uses" and placed on the Planning List due to copper exceedance and missing core parameters: dissolved metals (copper and cadmium).**
				varies by hardness **(A&Wc acute)**	**<10 - 13**	**1 of 1 event** **(in 2002)**	**Inconclusive**	
Mineral Creek headwaters - Concho Creek AZ15020002-648 A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Above Forest Road #404 LCMIN014.01 100593	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	>7.0 (90% saturation) (A&Wc)	6.4 - 9.9 (86 - 91%)	1 of 4		Lab reporting limits for dissolved copper were too high to use results for assessment.
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**2000-2001** **4 samples**	**Dissolved oxygen** **mg/L**	**> 7.0** **(90% saturation)** **A&Wc)**	**6.4 - 9.9** **(86 - 91%)**	**1 of 4**	**Inconclusive**	**ADEQ collected 4 samples in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to low dissolved oxygen and missing core parameter: dissolved copper.**
Nutrioso Creek headwaters - Picnic Creek AZ15020001-017 A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Near Nutrioso, Arizona LCNUT012.17 100936	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.1 - 9.2 (64 - 91%)	2 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
			Turbidity NTU	10 (A&Wc)	9 - 34	1 of 4		
	Summary Row **A&Wc Not attaining** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**2000-2001** **4 samples**	**Turbidity** **NTU**	**10** **(A&Wc)**	**9 - 34**	**1 of 4**	**Inconclusive** **(Not attaining)**	**ADEQ collected 4 samples in 2000-2001. A turbidity TMDL was approved by EPA in 2000. Assessed as "not attaining" and placed on the Planning List for TMDL follow-up monitoring.**

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Porter Creek headwaters - Show Low Creek AZ15020005-246 A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring Above Scott Reservoir LCPRT001.23 101415	2002 - 1 full suite	Turbidity NTU	10 (A&Wc)	14	1 of 1		Lab reporting limits for copper samples were too high to use results for assessment. Missing core parameter: dissolved copper.
	AGFD Ambient Monitoring Above Scott Reservoir LCPRT001.17	1998 - 1 field, nutrients	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998-2002** **2 sampling events**	**Turbidity** **NTU**	**10** **(A&Wc)**	**14**	**1 of 1**	**Inconclusive** **(see comment)**	**Insufficient monitoring data to assess.** **Placed on the Planning List due to exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**
Rio de Flag Flagstaff WWTP - San Francisco Wash AZ15020015-004B A&Wedw, PBC	ADEQ Ambient Monitoring At Doney Park, Flagstaff LCRDF002.97 10127	2000 - 1 full suite 2001 - 3 full suites	Turbidity NTU	50 (A&Wedw)	4 - 71	1 of 4		
	Summary Row **A&Wedw Inconclusive** **PBC Attaining**	**2000 - 2001** **4 sampling events**	**Turbidity** **NTU**	**50** **(A&Wedw)**	**4 - 71**	**1 of 4**	**Inconclusive** **(see comment)**	**ADEQ collected 4 samples in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to exceedance of former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**
Show Low Creek headwaters - Linden Wash AZ15020005-012 A&Wc, FC, FBC, AgI, AgL	AGFD Routine Monitoring Above Show Low Lake LCSHL017.18	1998 - 1 field, nutrients	No exceedances					
	ADEQ Ambient Monitoring Near Show Low, AZ LCSHL011.06 100340	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.0 - 8.7 (73 - 110%)	1 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
			Turbidity NTU	10 (A&Wc)	15 - 58	3 of 3		
	AGFD Routine Monitoring Above Fools Hollow Lake LCSHL010.47	1998 - 1 field, nutrients	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**1998- 2001** **6 samples** **5 sampling events**	**Turbidity** **NTU**	**10** **(A&Wc)**	**15 - 58**	**3 of 5**	**Inconclusive** **(see comment)**	**AGFD and ADEQ collected 6 samples at 3 sites in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Sliver Creek headwaters - Show Low Creek AZ15020005-013 A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Below AGFD hatchery LCSIL028.19 101125	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.5 - 10.0 (79 - 121%)	1 of 4		Lab reporting limits for dissolved copper were too high to use results for assessment.
			Turbidity NTU	10 (A&Wc)	8 - 19.4	1 of 4		
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	**2000 - 2001** **4 sampling events**	**Dissolved oxygen mg/L**	**> 7.0 (90% saturation) A&Wc)**	**6.5 - 10.0 (70 - 121%)**	**1 of 4**	**Inconclusive**	**ADEQ collected 4 samples in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to low dissolved oxygen, a missing core parameter (dissolved copper), and an exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**
			Turbidity NTU	**10 (A&Wc)**	**8 - 19.4**	**1 of 4**	**Inconclusive (see comment)**	
Silver Creek 7-mile Draw - Little Colorado R. AZ15020005-001 A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Near Snowflake LCSIL004.78 100337	2002 - 1 full suite	Turbidity NTU	10 (A&Wc)	136	1 of 1		
	Summary Row A&Wc Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive	**2002** **1 sampling event**	**Turbidity NTU**	**10 (A&Wc)**	**136**	**1 of 1**	**Inconclusive (Not attaining)**	**Assessed as "not attaining" due to turbidity exceedances (see comment in Table 14 to follow).** **Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**
LAKE MONITORING DATA								
Ashurst Lake AZL15020015-0090 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program LCASH-A (at dam) 100973	2000 - 1 full + 1 partial suite 2001 - 2 partial suites	Turbidity NTU	10 (A&Wc)	114 - 120	3 of 3		Lab reporting limits for copper were too high to use results for assessment.
	ADEQ Lakes Program LCASH-B (mid lake) 101294	2001 - 1 full suite	Turbidity NTU	10 (A&Wc)	116	1 of 1		
	ADEQ Lakes Program LCASH-BR (boat ramp) 101327	2001 - 1 *Escherichia coli*	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	**2000-2001** **6 samples** **4 sampling events**	**Turbidity NTU**	**10 (A&Wc)**	**114 - 120**	**4 of 4**	**Inconclusive (see comment)**	**ADEQ collected 6 samples in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters and exceedance of the former turbidity standard. The causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed.** **Missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).**

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Bear Canyon Lake AZ15020008-0130 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program LCBCL-A (deepest) 100969	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.6 - 8.0 (79 - 85%)	1 of 4		Lab detection limits for dissolved metals (cadmium, copper, and zinc) were too high to use results for assessments.
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgI, AgL)	5.8 - 6.8	3 of 4		
			Selenium µg/L	2.0 (A&Wc chronic)	<2 - 3	1 of 4		
	ADEQ Lakes Program LCBCL-B (mid lake) 100970	2000 - 1 partial suite	Dissolved oxygen mg/L	> 7 (90% saturation) (A&Wc)	6.7 (80%)	1 of 1		
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgI, AgL)	6.1	1 of 1		
	ADEQ Lakes Program LCBCL-BR (boat ramp) 100970	2001 - 1 *Escherichia coli*	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Inconclusive AgL Inconclusive	**2000 - 2001** **8 samples** **4 sampling events**	**Dissolved oxygen** **mg/L**	**> 7.0** **(90% saturation)** **(A&Wc)**	**8.6 - 8.0** **(79 - 85%)**	**2 of 5**	**Inconclusive**	**ADEQ collected 6 samples at 3 sites in 2000 - 2001. Assessed as "attaining some uses" and placed on the Planning List due to low dissolved oxygen, pH and selenium exceedances, and missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc).**
			pH **SU**	**6.5 - 9.0** **(A&Wc, FBC, AgI, AgL)**	**5.8 - 6.8**	**4 of 5**	**Inconclusive**	
			Selenium **µg/L**	**2.0** **(A&Wc chronic)**	**<2 - 3**	**1 of 4 events** **(insufficient events)**	**Inconclusive**	
Blue Ridge Reservoir AZL15020008-0200 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program LCBRR-A (deepest) 100974	2000 - 1 partial suite 2001 - 1 full + 2 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.7 - 11.0 (73 - 121%)	1 of 3		Lab reporting limits for dissolved metals (cadmium, copper, and zinc) were too high to use results for assessment.
	ADEQ Lakes Program LCBRR-C 101293	2001 - 1 partial suite	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	**2000 - 2001** **5 samples** **4 sampling events**	**Dissolved oxygen** **mg/L**	**> 7.0** **(90%saturation)** **(A&Wc)**	**6.7 - 11.0** **(73 - 121%)**	**1 of 3**	**Inconclusive**	**ADEQ collected 5 samples at 2 sites in 2000 - 2001. Assessed as "attaining some uses" and placed on the Planning List due to low dissolved oxygen and missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc).**
Bunch Reservoir AZL15020001-0230 A&Wc, FC, FBC, AgI, AgL	AGFD Ambient Monitoring LCBUN - MID LAKE	2001 - 3 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.6 - 8.2 (66 - 99%)	2 of 3		
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive	**2001** **3 sampling events**	**Dissolved oxygen** **mg/L**	**> 7.0** **(90%saturation)** **(A&Wc)**	**5.6 - 8.2** **(66 - 90%)**	**2 of 3**	**Inconclusive**	**AGFD collected 3 samples in 2001. Assessed as "inconclusive" and placed on the Planning List due to low dissolved oxygen and missing core parameters: turbidity, *Escherichia coli*, total boron, dissolved metals (copper, cadmium, and zinc), and total metals (mercury and lead).**

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Camero Lake AZL15020001-0260 A&Wc, FC, FBC, AgL	AGFD Ambient Monitoring LCCAR-MID LAKE	2001 - 3 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	3.9 - 7.5 (55 - 97%)	1 of 3		
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	8.3 - 9.9	2 of 3		
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**2001** **3 sampling events**	**Dissolved oxygen mg/L**	**> 7.0 (90% saturation) (A&Wc)**	**3.9 - 7.5 (55 - 97%)**	**1 of 3**	**Inconclusive**	**AGFD collected 3 samples in 2001. Assessed as "inconclusive" and placed on the Planning List due to low dissolved oxygen, high pH, and missing core parameters: turbidity, *Escherichia coli*, dissolved metals (copper, cadmium, and zinc), and total metals (mercury and lead).**
			pH SU	**6.5 - 9.0 (A&Ww, FBC, AgL)**	**8.3 - 9.9**	**2 of 3**	**Inconclusive**	
Cholla Lake AZL15020008-0320 A&Ww, FC, FBC	AGFD Ambient Monitoring LCCHO - MID LAKE	1999 - 3 partial suites 2001 - 1 partial suite	No exceedances					Lab reporting limits for mercury were too high to assess the standard.
	AGFD Ambient Monitoring Warmwater inflow LCCHO - INFLOW	1999 - 3 partial suites 2001 - 1 partial suite	No exceedances					
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**1999-2001** **8 samples** **4 sampling events**	**No exceedances**					**AGFD collected 8 samples in 1999-2001. Assessed as "inconclusive" and placed on the Planning List due to a fish kill in 2002 and missing core parameters: turbidity, *Escherichia coli*, total mercury, and dissolved metals (copper, cadmium, and zinc).**
Clear Creek Reservoir AZL15020008-0340 A&Wc, FC, FBC, DWS, AgI, AgL	AGFD Ambient Monitoring Above Forest Road #99 LCCCR - 1	1999 - 3 partial suites	No exceedances					
	AGFD Ambient Monitoring Dam Site LCCCR - DAM SITE	1999 - 2 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.3 - 7.6 (79 - 99%)	1 of 2		
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **DWS Inconclusive** **AgI Inconclusive** **AgL Attaining**	**1999** **5 samples** **3 sampling events**	**Dissolved oxygen mg/L**	**> 7.0 (90% saturation) (A&Wc)**	**6.3 - 7.6**	**1 of 5**	**Inconclusive**	**AGFD collected 5 samples at 2 sites in 1999. Assessed as "attaining some uses" and placed on the Planning List due to one low dissolved oxygen result and missing core parameters: turbidity, *Escherichia coli*, total fluoride, total boron, dissolved metals (copper, cadmium, and zinc), and total mercury.**
Kinnikinick Lake AZL15020015-0730 A&Wc, FC, FBC, AgL	ADEQ Lakes Program LCKIN - A (deepest) 100971	2000 - 1 partial suite 2001 - 2 full + 1 partial suites 2002 - 1 partial suite	Turbidity NTU	10 (A&Wc)	66 - 71	5 of 5		Lab reporting limits for dissolved cadmium and copper were too high to use results for assessment.
			Selenium µg/L	2.0 (A&Wc chronic)	<2 - 3	1 of 4		
	ADEQ Lakes Program LCKIN - B (mid lake) 100972	2000 - 1 partial suite 2001 - 1 partial suite	Turbidity NTU	10 (A&Wc)	60 - 69	2 of 2		
	ADEQ Lakes Program LCKIN - BR (boat ramp) 100972	2001 - 1 *Escherichia coli*	No exceedances					

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Not attaining FC Attaining FBC Inconclusive AgL Attaining	2000 - 2002 8 samples 4 sampling events	Turbidity NTU	10 (A&Wc)	60 - 71	7 of 7	Inconclusive (Not attaining)	ADEQ collected 8 samples at 3 sites in 2000 - 2002. Assessed as "not attaining" due to turbidity exceedances (see comment in Table 14 to follow). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed. Placed on the Planning List due to selenium exceedances and missing core parameters: dissolved metals (copper, cadmium, and zinc) and *Escherichia coli*.
			Selenium µg/L	2 (A&Wc chronic)	<2 - 3	1 of 4 events (insufficient events)	Inconclusive	
Lake Mary – (Upper) AZL15020015-0900 A&Wc, FC, FBC, DWS, AgL	ADEQ Lakes Program LCMAU - A (deepest) 100029	2002 - 1 partial suite	Turbidity NTU	10 (A&Wc)	70	1 of 1		Missing core parameters: dissolved oxygen, field pH, *Escherichia coli*, and dissolved metals (cadmium and copper). Lab reporting limits for dissolved cadmium and copper were too high to use results for assessment. All samples collected on the same date.
	ADEQ Lakes Program LCMAU - B (mid lake) 101312	2002 - 1 partial suite	Turbidity NTU	10 (A&Wc)	67	1 of 1		
	ADEQ Lakes Program LCMAU - C 101314	2002 - 1 partial suite	Turbidity NTU	10 (A&Wc)	69	1 of 1		
	Summary Row A&Wc Inconclusive FC Impaired FBC Inconclusive DWS Inconclusive AgL Inconclusive	2002 3 samples 1 sampling event	Turbidity NTU	10 A&Wc	67 - 70	3 of 3 samples (1 of 1 event)	Inconclusive (see comment)	Assessed as "impaired" due to mercury in fish tissue. EPA placed this reach on the 2002 303(d) List because mercury in fish tissue led to a fish consumption advisory in 2002. Once listed, the lake cannot be delisted until a TMDL is complete or there are sufficient data collected to indicate that mercury in fish tissue is no longer a concern (fish consumption advisory is removed). Placed on the Planning List due to exceedances of the former turbidity standard. Turbidity exceedances will be investigated during the next monitoring cycle for this watershed.
Lee Valley Reservoir AZL15020001-0770 A&Wc, FC, FBC, AgI, AgL	AGFD Ambient Monitoring LCLEE	1998 - 3 partial suites	No exceedances					Lab reporting limits for dissolved cadmium and copper were too high to use results for assessment.
	ADEQ Lakes Program LCLEE - A (deepest) 101356	2001 - 1 partial suite 2002 - 2 partial suites	No exceedances					
	ADEQ Lakes Program LCLEE - SH (shoreline) 101357	2002 - 2 *Escherichia coli*	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1998 - 2002 8 samples 6 sampling events	No exceedances					ADEQ and AGFD collected 8 samples in 1998 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: *Escherichia coli* and dissolved metals (cadmium and copper).

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Long Lake (Lower) AZL15020008-0820 A&Wc, FC, FBC, AgI, AgL	AGFD Ambient Monitoring North end LCLLL - North	1998 - 3 partial suites	No exceedances					
	AGFD Ambient Monitoring South Cove LCLLL - South	1998 - 3 partial suites 2001 - 1 partial suite	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1998 - 2001** **7 samples** **3 sampling events**	**No exceedances**					**AGFD collected 7 samples in 1998 - 2001. Assessed as "Inconclusive" and placed on the Planning List due to insufficient seasonal coverage and missing core parameters: turbidity, *Escherichia coli*, total boron, total metals (mercury, manganese, copper, and lead), and dissolved metals (copper, cadmium, and zinc).** **A fish consumption advisory due to mercury in fish tissue was issued in 2003. This may be evidence of narrative standards violations.**
Lyman Lake AZL15020001-0850 A&Wc, FC, FBC, AgI, AgL	AGFD Ambient Monitoring LCLYM - A (dam site)	1998 - 1 partial suite	No exceedances					Missing all core parameters: turbidity, field pH, *Escherichia coli*, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, copper, and lead).
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1997-1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.** **A fish consumption advisory due to mercury in fish tissue was issued in 2002. This may be evidence of narrative standards violations.**
Nelson Reservoir AZL15020001-1000 A&Wc FC, FBC, AgI, AgL	AGFD Ambient Monitoring LCNEL - DAM SITE	1998 - 1 partial suite	No exceedances					Missing core parameters: turbidity, *Escherichia coli*, total boron, and total metals (mercury, manganese, copper, and lead) and dissolved metals (copper, cadmium, and zinc).
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Rainbow Lake AZL15020005-1170 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program LCRAI - A (deepest) 100069	2002 - 1 full suite	No exceedances					Missing core parameter: field turbidity,
	ADEQ Lakes Program LCRAI - B (mid lake) 100070	2002 - 1 partial suite	No exceedances					
	ADEQ Lakes Program LCRAI - BR (boad ramp) 101402	2002 - 1 *Escherichia coli*	No exceedances					

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Not attaining FC Inconclusive FBC Not attaining Agl Not attaining AgL Not attaining	**2002** **3 samples** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.** **Narrative nutrient TMDL completed in 2000. This lake will remain "not attaining" until there are sufficient data to indicate that dissolved oxygen, pH, and nutrients are supporting designated uses.**
River Reservoir AZL15020001-1220 A&Wc, FC, FBC, Agl, AgL	AGFD Ambient Monitoring LCRIV-MID (mid lake)	2001 - 3 partial suites	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive Agl Inconclusive AgL Inconclusive	**2001** **3 sampling events**	**No exceedances**					**AGFD collected 3 samples in 2001. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: turbidity, *Escherichia coli*, total boron, total metals (mercury and lead), and dissolved metals (copper, cadmium and zinc).**
Soldier's Annex Lake AZL15020008-1430 A&Wc FC, FBC, Agl, AgL	AGFD Ambient Monitoring LCNEL - DAM SITE	2001 - 1 partial suite	No exceedances					Missing core parameters: turbidity, *Escherichia coli*, dissolved oxygen, total boron, total metals (mercury, manganese, lead, and copper), and dissolved metals (copper, cadmium, and zinc).
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive Agl Inconclusive AgL Inconclusive	**2001** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.** **A fish consumption advisory due to mercury in fish tissue was issued in 2003. Assessed as "inconclusive" and placed on the Planning List. This may be evidence of narrative standards violations.**
Soldiers Lake AZ15020008-1440 A&Wc, FC, FBC, Agl, AgL	ADEQ Priority Pollutant Program – fish tissue	Data not shown No water quality data						
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive Agl Inconclusive AgL Inconclusive							**A fish consumption advisory due to mercury in fish tissue was issued in 2003. Assessed as "inconclusive" and placed on the Planning List. This may be evidence of narrative standards violations.**
Tunnel Reservoir AZL15020001-1550 A&Wc FC, FBC, Agl, AgL	AGFD Ambient Monitoring LCNEL - MID LAKE	2001 - 3 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	4 - 8.1 (56 - 97%)	1 of 3		
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive Agl Inconclusive AgL Inconclusive	**2001** **3 sampling events**	**Dissolved oxygen mg/L**	**> 7.0 (90% saturation) (A&Wc)**	**4 - 8.1 (56 - 97%)**	**1 of 3**	**Inconclusive**	**AGFD collect 3 samples in 2001. Assessed as "inconclusive" and placed on the Planning List due to low dissolved oxygen and missing core parameters: turbidity, *Escherichia coli*, total boron, total metals (mercury, manganese, and lead), and dissolved metals (copper, cadmium, and zinc).**

TABLE 11. LITTLE COLORADO - SAN JUAN WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Woods Canyon Lake AZL15020010-1700 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Lakes Program LCWCL - A (deepest) 100092	2000 - 1 partial suite 2001 - 2 full + 1 partial suite	No exceedances					
	ADEQ Lakes Program LCWCL - B (mid lake) 10093	2000 - 1 full suite 2001 - 2 full suites	No exceedances					
	ADEQ Lakes Program LCWCL - BR (boat ramp) 101324	2001 - 1 *Escherichia coli*	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining	2000 - 2001 8 samples 4 sampling events	No exceedances					ADEQ collected 8 samples at 3 sites in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
LITTLE COLORADO-SAN JUAN WATERSHED – STREAM ASSESSMENTS				
Barbershop Canyon Creek headwaters - East Clear Creek 10 miles AZ15020008-537	A&Wc Inconclusive FC Attaining FBC Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to missing core parameter: dissolved copper.		
Billy Creek headwaters - Show Low Creek 19 miles AZ15020005-019	A&Wc Inconclusive FC Attaining FBC Inconclusive AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to: 1. *Escherichia coli* exceedance (1 of 4 sampling events). 2. Former turbidity standard exceedances (4 of 6 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 3. Missing core parameter: dissolved copper.		
Brown Creek headwaters - Silver Creek 15 miles AZ15020005-016	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 2 samples).		
Buck Springs Canyon Creek headwaters - Leonard Canyon 7 miles AZ15020008-557	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current data. Added in 2002 due to: 1. Turbidity and pH exceedances (1 of 1 sample each). 2. Missing core parameters. 3. Insufficient sampling events.		
Chevelon Creek headwaters - West Chevelon Creek 32 miles AZ15020010-006	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current data. Added in 2002 due to: 1. Low dissolved oxygen. 2. Missing core parameters.		
Chevelon Creek Black Canyon - Little Colorado River 19 miles AZ15020010-001	A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to former turbidity standard exceedances (4 of 4 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
Colter Creek headwaters - Nutrioso Creek 9 miles AZ15020001-293	A&Wc Inconclusive FC Attaining FBC Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to missing core parameter: dissolved copper.		

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
East Clear Creek headwaters - Yeager Canyon 38 miles AZ15020008-009	A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to: 1. Low dissolved oxygen (2 of 4 samples). 2. Missing core parameter: dissolved copper.		
Fish Creek headwaters - Little Colorado River 9 miles AZ15020001-211	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (only 1 sample). 2. Mercury exceedance (1 of 1 sample).		
Hall Creek headwaters - Little Colorado River 14 miles AZ15020001-012	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Lee Valley Creek Lee Valley Reservoir - East Fork Little Colorado River 3 miles AZ15020001-232B	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Little Colorado River West Fork Little Colorado - Water Canyon Creek 20 miles AZ15020001-011	A&Wc Not attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 4A -- Not attaining	On the Planning List for turbidity TMDL follow-up monitoring. Turbidity still exceeding former standard in 9 of 12 samples. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	OK	A turbidity TMDL was approved by EPA in 2002. Placed on the Planning List in 2002 for TMDL follow-up monitoring.
Little Colorado River Water Canyon Creek - Nutrioso Creek 4 miles AZ15020001-010	A&Wc Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 4A — Not attaining	On the Planning List. No current data. Added in 2002 for turbidity TMDL follow up monitoring (turbidity exceedances then in 5 of 6 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	OK	A turbidity TMDL was approved by EPA in 2002. Placed on the Planning List in 2002 for TMDL follow-up monitoring.
Little Colorado River Nutrioso Creek - Carnero Wash 12 miles AZ15020001-009	A&Wc Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 4A -- Not attaining	On the Planning List for: 1. *Escherichia coli* exceedance (1 of 12 sampling events, occurred in 2000). 2. Turbidity TMDL follow-up monitoring. Former turbidity standard exceeded in 9 of 12 samples. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	+TURB/SSC	A turbidity TMDL for the two reaches upstream was approved by EPA in 2002. Implementation of strategies identified in that TMDL should also bring this reach into compliance with its standards. Therefore, assessed as "not attaining" and placed on the Planning List for TMDL follow-up monitoring.

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Little Colorado River unnamed tributary 15020001-021 to Lyman Lake 3 miles AZ15020001-005	A&Wc Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 4A -- Not attaining	On the Planning List due to: 1. *Escherichia coli* exceedance (1 of 3 sampling events). 2. Turbidity TMDL follow up monitoring. Former turbidity standard exceeded in 3 of 3 samples. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	hold? TURB/SSC	A turbidity TMDL was approved by EPA in 2002 for two reaches only 3.2 miles upstream (15020001-010 and -009). Implementation of strategies identified in that TMDL should also bring this reach into compliance with its standards. Therefore, assessed as "not attaining" and placed on the Planning List for TMDL follow-up monitoring.
Little Colorado River HUC 15020001 boundary - unnamed tributary 15020002-025 14 miles AZ15020002-024	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 2 samples).		
Little Colorado River Silver Creek - Carr Wash 6 miles AZ15020002-004	A&Wc Not attaining – turbidity FC Attaining FBC Impaired – E.coli DWS Inconclusive AgI Attaining AgL Attaining Category 5 -- Impaired	On the Planning List due to: 1. Lead exceedances (3 of 12 samples) . 2. Former turbidity standard exceedances (8 of 8 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	Add *Escherichia coli* to the 303(d) List due to exceedances in 2 of 9 sampling events. OK → add Pb	To be consistent with other assessments, this water will be included as a Category 4D water (not attaining) for turbidity and added to the Planning List for the following reasons: 1. Arizona is assessing all waters that are "impaired" under the former turbidity standard (repealed in 2002) as "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." 2. For the 2002 303(d) List, EPA determined that 5 or more exceedances with less than 20 samples were sufficient to list a water as "impaired", although Arizona's Impaired Waters Identification Rule would require a minimum of 20 samples. 3. Turbidity exceeded standards in 8 of 8 samples. EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to *turbidity*.
Little Colorado River Zion Reservoir - Concho Creek 7 miles AZ15020002-016	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to: 1. Potential exceedances of the suspended sediment concentration (SSC) geometric mean standard. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed. 2. Missing core parameters (only SSC data was collected).	TURB/SSC check	Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration.

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Little Colorado River Porter Tank - McDonalds Wash 17 miles AZ15020008-017	A&Ww Impaired FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 5 -- Impaired	On the Planning List due to: 1. Missing core parameters (only SSC data was collected). 2. Potential exceedances of the suspended sediment concentration geometric mean standard. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed.	On the 303(d) List (since 1992) due to copper and silver exceedances. ADEQ initiated a silver and copper TMDL investigation in 2002. maybe Fix 3/SSC	Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration.
Little Colorado River, East Fork headwaters - Hall Creek 11 miles AZ15020001-230	A&Wc Inconclusive FC Attaining FBC Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to missing core parameters: dissolved metals (copper and cadmium).		
Little Colorado River, South Fork headwaters - Little Colorado River 12 miles AZ15020001-027	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Little Colorado River, West Fork headwaters - Government Springs 8 miles AZ15020001-013A Unique Water	A&Wc Inconclusive FC Attaining FBC Attaining Category 2 — Attaining Some Uses	On the Planning List due to missing core parameters: dissolved metals (copper and cadmium).		
Little Colorado River, West Fork Government Springs - Little Colorado River 1 mile AZ15020001-013B	A&Wc Inconclusive FC Attaining FBC Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to: 1. Copper exceedance (1 of 1 sample). 2. Missing core parameters: dissolved metals (copper and cadmium).		
Mineral Creek headwaters - Concho Creek 26 miles AZ15020002-648	A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to: 1. Low dissolved oxygen (1 of 4 samples). 2. Missing core parameter: dissolved copper.		
Nutrioso Creek headwaters - Picnic Creek 27 miles AZ15020001-017	A&Wc Not attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 4A – Not attaining	On the Planning List for turbidity TMDL follow-up monitoring. Turbidity exceeded the former standard in 1 of 4 samples. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	OK	A turbidity TMDL was approved by EPA in 2000. Added to the Planning List in 2002 for TMDL follow-up monitoring.
Nutrioso Creek Picnic Creek - Little Colorado River 4 miles AZ15020001-015	A&Wc Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 4A -- Not attaining	On the Planning List for: 1. Turbidity TMDL follow-up monitoring. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 2. Insufficient monitoring (no current monitoring data).	OK	A turbidity TMDL was approved by EPA in 2000. Added to the Planning List in 2002 for TMDL follow-up monitoring.

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Porter Creek headwaters - Show Low Creek 4 miles AZ15020005-246	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (only 2 samples). 2. Former turbidity standard exceedance (1 of 1 sample). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
Rio de Flag Flagstaff WWTP - San Francisco Wash 23 miles AZ15020015-004B	A&Wedw Inconclusive PBC Attaining Category 2 – Attaining Some Uses	On the Planning List due to former turbidity standard exceedance (1 of 4 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
Show Low Creek headwaters - Linden Wash 41 miles AZ15020005-012	A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to former turbidity standard exceedances (3 of 5 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
Silver Creek headwaters - Show Low Creek 34 miles AZ15020005-013	A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to: 1. Low dissolved oxygen (1 of 4 samples). 2. Missing core parameter: dissolved copper. 3. Former turbidity standard exceedance (1 of 4 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
Silver Creek Seven Mile Draw - Little Colorado River 9 miles AZ15020005-001	A&Wc Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 4D — Not attaining	On the Planning List due to: 1. Insufficient monitoring data to assess (only 1 sample). 2. Exceedance of the former turbidity standard (1 of 1 sample). Older data indicated 8 of 8 samples exceeded. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		To be consistent with other assessments, this water will be included as a Category 4D water (not attaining) for turbidity and added to the Planning List for the following reasons: 1. Arizona is assessing all waters that are "impaired" under the former turbidity standard (repealed in 2002) "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." 2. For the 2002 303(d) List, EPA determined that 5 or more exceedances with less than 20 samples were sufficient to list a water as "impaired", although Arizona's Impaired Waters Identification Rule would require a minimum of 20 samples. 3. Turbidity exceeded standards in 8 of 8 samples in older data. EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Walnut Creek Pine Lake - Rainbow Lake 9 miles AZ15020005-238	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List. No current data. Added in 2002 due to missing core parameters.		
Willow Creek headwaters - East Clear Creek 32 miles AZ15020008-011	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List. No current data. Added in 2002 due to missing core parameters.		
Willow Springs Canyon Creek headwaters - Chevelon Creek 9 miles AZ15020010-240 (previously listed as Willow Spring Creek)	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to missing core parameters.		
Woods Canyon Creek headwaters - Chevelon Creek 13 miles AZ15020010-084	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to low dissolved oxygen (1 of 2 samples).		
LITTLE COLORADO-SAN JUAN WATERSHED – LAKE ASSESSMENTS				
Ashurst Lake 201 acres AZL15020015-0090	A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic Status – Eutrophic	On the Planning List due to: 1. Missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc). 2. Former turbidity standard exceedances (4 of 4 samples). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed.	TLES/SSC	
Bear Canyon Lake 55 acres AZL15020008-0130	A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 2 -- Attaining Some Uses Trophic Status – Mesotrophic	On the Planning List due to: 1. Low dissolved oxygen (2 of 5 samples). 2. Low pH (4 of 5 samples). 3. Chronic selenium exceedance (1 of 4 sampling events). 4. Missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc).	add pH 4/5	
Black Canyon Lake 37 acres AZ15020010-0180	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive Trophic Status not calculated	On the Planning List due to: 1. A fish kill in 2002 related to the Rodeo-Chediski Fire. This may be evidence of narrative standards violations. Monitoring is needed to determine long-term negative impacts from the fire. 2. No current monitoring data.		

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Blue Ridge Reservoir 293 acres AZL15020008-0200	A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic Status – Mesotrophic	On the Planning List due to: 1. Low dissolved oxygen (1 of 3 samples). 2. Missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc).		
Bunch Reservoir 64 acres AZL15020001-0230	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 — Inconclusive Trophic Status not calculated	On the Planning List due to: 1. Low dissolved oxygen (2 of 3 samples). 2. Missing core parameters: *Escherichia coli*, dissolved metals (copper, cadmium, and zinc), total boron, and total metals (mercury and lead).		
Carnero Lake 67 acres AZL15020001-0260	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive Trophic Status not calculated	On the Planning List due to: 1. Low dissolved oxygen (1 of 3 samples). 2. High pH (2 of 3 samples). 2. Missing core parameters: *Escherichia coli*, turbidity, dissolved metals (copper, cadmium, and zinc), and total metals (mercury and lead).		
Cholla Lake 130 acres AZL15020008-0320	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 — Inconclusive Trophic status – Hypereutrophic	On the Planning List due to 1. Missing core parameters. *Escherichia coli*, turbidity, dissolved metals (copper, cadmium, and zinc), and total mercury. 2. Fish kill ~~in 2002~~ was related to resuspension of sediment nutrient loads. This may be evidence of a narrative standards violations.		
Clear Creek Reservoir 29 acres AZL15020008-0340	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Attaining Category 2 -- Attaining Some Uses Trophic status – Eutrophic	On the Planning List due to: 1. Low dissolved oxygen (1 of 5 samples). 1. Missing core parameters: *Escherichia coli*, turbidity, dissolved metals (copper, cadmium, and zinc), total fluoride, total boron, and total mercury.		

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Kinnikinick Lake 114 acres AZL15020015-0730	A&Wc Not attaining FC Attaining FBC Inconclusive AgL Attaining Category 5 – Not attaining Trophic status – Eutrophic	On the Planning List due to: 1. Former turbidity standard exceedances (7 of 7 samples). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed. 2. Chronic selenium exceedance (1 of 4 sampling events). 3. Missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc).		To be consistent with other assessments, this water will be included as a Category 4D water (not attaining) and added to the Planning List for the following reasons: 1. Arizona is assessing all waters that are "impaired" under the former turbidity standard (repealed in 2002) as "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." 2. For the 2002 303(d) List, EPA determined that 5 or more exceedances with less than 20 samples were sufficient to list a water as "impaired", although Arizona's Impaired Waters Identification Rule would require a minimum of 20 samples. 3. Turbidity exceeded standards in 7 of 7 samples. EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Lake Mary (lower) 764 acres AZL15020015-0890	A&Wc Inconclusive FC Impaired FBC Inconclusive AgL Inconclusive Category 5 — Impaired Trophic status not calculated	On the Planning List due to insufficient monitoring data (no current water quality monitoring data).	EPA placed this reach on the 2002 303(d) List due to the mercury fish consumption advisory issued in 2002. EPA's listing was based on violation of a narrative standard. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed the lake cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that mercury in fish tissue is no longer a concern (e.g., fish consumption advisory is removed). ADEQ is currently collecting fish tissue data and investigating potential mercury sources in support of completing a TMDL.	Mercury does not stay in an aqueous state and bioaccumulates rapidly up the food chain. For this assessment, t lab reporting limits were not low enough to assess chronic mercury standards; therefore, the lack of exceedances in the water column does not provide sufficient information about mercury problems in the lake. Recently ADEQ has applied new "clean sampling" techniques that will provide lower detection limits.
Lake Mary (upper) 760 acres AZL15020015-0900	A&Wc Inconclusive FC Impaired FBC Inconclusive DWS Inconclusive AgL Inconclusive Category 5 – Impaired Trophic status – Eutrophic	On the Planning List due to: 1. Insufficient water quality data to assess (only 1 sampling event). 2. Exceedance of the former turbidity standard (1 out of 1 sampling event). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed.	EPA placed this reach on the 2002 303(d) List due to the mercury fish consumption advisory issued in 2002. EPA's listing was based on a narrative standard violation. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed the surface water cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that mercury in fish tissue is no longer a concern (e.g., fish consumption advisory is removed). ADEQ is currently collecting fish tissue data and investigating potential mercury sources in support of completing a TMDL.	Mercury does not stay in an aqueous state and bioaccumulates rapidly up the food chain. For this assessment, t lab reporting limits were not low enough to assess chronic mercury standards; therefore, the lack of exceedances in the water column does not provide sufficient information about mercury problems in the lake. Recently ADEQ has applied new "clean sampling" techniques that will provide lower detection limits.

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Lee Valley Reservoir 38 acres AZL15020001-0770	A&Wc Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 — Attaining Some Uses Trophic status – Hypereutrophic	On the Planning List due to missing core parameters: *Escherichia coli* and dissolved metals (cadmium and copper).		
Long Lake (lower) 323 acres AZL15020008-0820	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive Trophic status not calculated	On the Planning List due to: 1. Missing core parameters: turbidity, *Escherichia coli*, total boron, total metals (mercury, manganese, copper, and lead), and dissolved metals (copper, cadmium, and zinc). 2. Insufficient seasonal coverage. 3. Fish consumption advisory issued in 2003 due to mercury in fish tissue may be evidence of a narrative toxic standards violation.	add HC	A fish consumption advisory was issued due to mercury in fish tissue in 2003. For the 2002 303(d) List, EPA placed waters with a fish consumption advisory on the 303(d) List as the advisory was considered adequate evidence of a narrative toxic standards violation. ADEQ anticipates that EPA will take the same action and place this water on the 2004 303(d) List.
Lyman Lake 1308 acres AZL15020001-0850	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed) Trophic status not calculated	On the Planning List due to: 1. Insufficient monitoring data to assess (only 1 sample). 2. A fish consumption advisory issued in 2002 for mercury in fish tissue. This may be evidence of a narrative toxic standards violation.	add Hg	A fish consumption advisory was issued due to mercury in fish tissue in 2002. For the 2002 303(d) List, EPA placed waters with a fish consumption advisory on the 303(d) List as the advisory was considered adequate evidence of a narrative toxic standards violation. ADEQ anticipates that EPA will take the same action and place this water on the 2004 303(d) List.
McKay Reservoir 12 acres AZL15020001-0007	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed) Trophic status not calculated	On the Planning List. No current monitoring data. Added in 2002 due to: 1. Low dissolved oxygen (1 of 1 sample). 2. High pH (1 of 1 sample). 3. Missing core parameters. 4. Insufficient sampling events.		
Nelson Reservoir 67 acres AZL15020001-1000	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed) Trophic status not calculated	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Rainbow Lake 111 acres AZL15020005-1170	A&Wc Not attaining FC Inconclusive FBC Not attaining AgI Not attaining AgL Not attaining Category 4A -- Not attaining Trophic status – Eutrophic	On the Planning List for: 1. TMDL follow-up monitoring (nutrients and pH). 2. Missing core parameter (field turbidity).		Nutrient and pH TMDLs were approved by EPA in 2000. Placed on the Planning List in 2002 for follow-up monitoring.

TABLE 12. LITTLE COLORADO-SAN JUAN WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
River Reservoir 141 acres AZL15020001-1220	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 — Inconclusive Trophic status not calculated	On the Planning List due to missing core parameters: turbidity, *Escherichia coli*, total boron, total metals (mercury, and lead), and dissolved metals (copper, cadmium, and zinc).		
Soldiers Annex Lake 122 acres AZL15020008-1430	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed) Trophic Status not calculated	On the Planning List due to: 1. Insufficient monitoring data to assess (only 1 sample). 2. A fish consumption advisory issued in 2003 for mercury in fish tissue. This may be evidence of a narrative toxic standards violation.	add Hg	A fish consumption advisory was issued due to mercury in fish tissue in 2003. For the 2002 303(d) List, EPA placed waters with a fish consumption advisory on the 303(d) List as the advisory was considered adequate evidence of a narrative toxic standards violation. ADEQ anticipates that EPA will take the same action and place this water on the 2004 303(d) List.
Soldiers Lake 28 acres AZ15020008-1440	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed) Trophic Status not calculated	On Planning List due to: 1. No current water quality monitoring data. 2. A fish consumption advisory issued in 2003 for mercury in fish tissue. This may be evidence of a narrative toxic standards violation.	add Hg	A fish consumption advisory was issued due to mercury in fish tissue in 2003. For the 2002 303(d) List, EPA placed waters with a fish consumption advisory on the 303(d) List as the advisory was considered adequate evidence of a narrative toxic standards violation. ADEQ anticipates that EPA will take the same action and place this water on the 2004 303(d) List.
Tunnel Reservoir 43 acres AZL15020001-1550	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive Trophic status not calculated	On the Planning List due to: 1. Missing core parameters: *Escherichia coli*, turbidity, total boron, total metals (mercury, manganese, and lead) and dissolved metals (copper, cadmium, and zinc). 2. Low dissolved oxygen (1 of 3 samples).		
Woods Canyon Lake 70 acres AZL15020010-1700	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 2 — Attaining some uses Trophic status – Eutrophic	On the Planning List due to missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).		

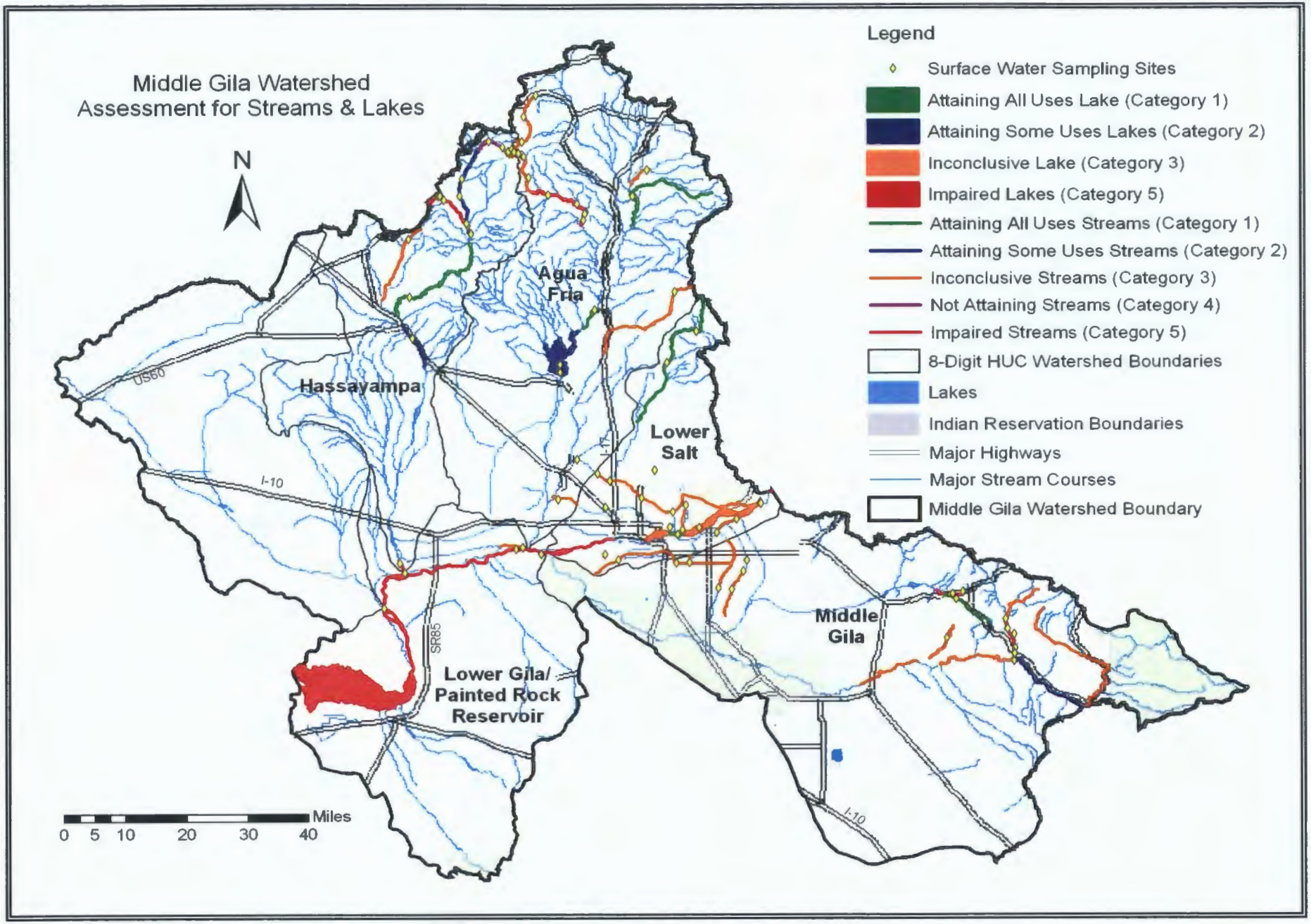


Figure 19. Middle Gila Watershed 2004 Monitoring and Assessment Map

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Agua Fria River Sycamore Creek - Big Bug Creek AZ15070102-023 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Biocriteria Program Upstream of Big Bug Creek MGAFR064.94 100711	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Below USGS gaging station MGAFR064.91 100710	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **DWS Attaining** **AgI Attaining** **AgL Attaining**	**1998 - 2002** **5 sampling events**	**No exceedances**					**ADEQ collected 5 samples at 2 sites in 1998 - 2002. Assessed as "attaining all uses."**
Agua Fria River Little Squaw Creek - Cottonwood Creek AZ15070102-017 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring Below Rock Springs Gage MGAFR043.96 101304	2001 - 1 full suite 2002 - 3 full suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	1.74 - 8.26 (21 - 116%)	2 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **DWS Attaining** **AgI Attaining** **AgL Attaining**	**2001 - 2002** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2001 - 2002. Assessed as "attaining all uses."**
Antelope Creek headwaters - Martinez Creek AZ15070103-010 A&Ww, FC, FBC, AgL	ADEQ Biocriteria Program Above Road Crossing near Stanton MGANT011.29 100713	1998 - 1 partial suite	No exceedances					
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Arizona Canal Granite Reef Dam - Cholla WTP AZ15060106B-099A DWS, AgI, AgL	SRP Routine Monitoring At Granite Reef Dam MGAZC021.79 SVCA 1-0.0	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 12 partial suites 2001 - 12 partial suites 2002 - 11 partial suites	No exceedances					

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	SRP Routine Monitoring At Invergorden (64th Street) MGAZC014.51 SVCA 1-3.9	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 11 partial suites 2002 - 11 partial suites	No exceedances					
	SRP Routine Monitoring At Squaw Peak Water Treatment Plant MGAZC010.48 SVCA 1-9.3	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 11 partial suites 2002 - 11 partial suites	No exceedances					
	SRP Routine Monitoring At Deer Valley Water Treatment Plant MGAZC005.74 SVCA 1-14.5	1998 - 7 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 12 partial suites 2002 - 12 partial suites	No exceedances					
	SRP Routine Monitoring At Cholla Water Treatment Plant MGAZC003.90 SVCA 1-16.6	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 11 partial suites 2002 - 11 partial suites	No exceedances					
	Summary Row **DWS Inconclusive** **Agl Inconclusive** **AgL Inconclusive**	**1998 - 2002** **286 samples** **57 sampling events**	**No exceedances**					**SRP collected 286 samples at 5 sites in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: total arsenic, total fluoride, and total metals (chromium, copper, lead, manganese, and mercury).**
Arizona Canal Cholla WTP - HUC boundary 15070102 AZ15060106B-099B Agl, AgL	SRP Routine Monitoring At 75th Ave. and Greenway MGAZC001.48 LT1-20.0	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 11 partial suites 2002 - 11 partial suites	No exceedances					
	Summary Row **Agl Inconclusive** **AgL Inconclusive**	**1998 - 2002** **55 sampling events**	**No exceedances**					**SRP collected 55 samples in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: field pH and total metals (copper, lead, and manganese).**
Arnett Creek headwaters - Queen Creek AZ15050100-1818 A&Ww, FC, FBC (tributary rule)	ADEQ Ambient Monitoring Near town of Superior MGARN001.57 101306	2001 - 1 full suite 2002 - 3 full suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	3.4 - 9.1 (44 - 104%)	2 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining**	**2001 - 2002** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2001 - 2002. Assessed as "attaining all uses."**

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Blue John Creek headwaters - Unnamed trib to Lynx Creek AZ15070102-471 A&Wc, FC, FBC (tributary rule)	Weston Solutions for EPA Above unnamed tributary (LC-BSC-JUP) MGBLJ000.05	2001 - 1 metals suite (dissolved only)	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	54.8	1 of 1		Missing core parameters: dissolved oxygen, *Escherichia coli*, pH, turbidity/SSC. Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
				varies by hardness (A&Wc chronic)	54.8	1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	81.7	1 of 1		
				varies by hardness (A&Wc chronic)	81.7	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	5060	1 of 1		
				varies by hardness (A&Wc chronic)	5060	1 of 1		
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive	2001 1 sampling event	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	54.8	1 of 1 event (in 2001)	Inconclusive	Insufficient monitoring data to assess. Placed on the Planning List due to cadmium, copper, and zinc exceedances.
				varies by hardness (A&Wc chronic)	54.8	1 of 1 event (insufficient events)	Inconclusive	
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	81.7	1 of 1 event (in 2001)	Inconclusive	
				varies by hardness (A&Wc chronic)	81.7	1 of 1 event (insufficient events)	Inconclusive	
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	5060	1 of 1 event (in 2001)	Inconclusive	
				varies by hardness (A&Wc chronic)	5060	1 of 1 event (insufficient events)	Inconclusive	
Buckeye Canal Gila River - South Extension Canal AZ15070101-209 AgI, AgL	USGS NAWQA Site #09514000 Near Avondale MGBKC000.015 101494	1998 - 4 partial suites						
	Summary Row AgI Inconclusive AgL Inconclusive	1998 4 sampling events	No exceedances					USGS collected 4 samples in 1998. Assessed as "Inconclusive" and placed on the Planning List due to missing core parameters: total boron and total metals (copper, lead, manganese).

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Cash Mine Creek headwaters - Hassayampa River AZ15070103-349 A&Wc, FBC, FC (tributary rule)	Weston Solutions for EPA Above unnamed tributary (HR-MCT-BCSD) MGCSM000.24	2001 - 1 metals suite (dissolved only)	Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	2820	1 of 1		Missing core parameters: dissolved oxygen, *Escherichia coli*, pH, turbidity/SSC. Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
				varies by hardness (A&Wc chronic)	2820	1 of 1		
			Copper (total) µg/L	1300 (FBC)	2820	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	256	1 of 1		
				varies by hardness (A&Wc chronic)	256	1 of 1		
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**2001** **1 sampling event**	**Copper (dissolved)** **µg/L**	**varies by hardness** **(A&Wc acute)**	**2820**	**1 of 1 event** **(in 2001)**	**Inconclusive**	**Insufficient monitoring data to assess.** **Placed on the Planning List due to copper and zinc exceedances.**
				varies by hardness **(A&Wc chronic)**	**2820**	**1 of 1 event**	**Inconclusive**	
			Copper (total) **µg/L**	**1300** **(FBC)**	**2820**	**1 of 1 event**	**Inconclusive**	
			Zinc (dissolved) **µg/L**	**varies by hardness** **(A&Wc acute)**	**256**	**1 of 1 event** **(in 2001)**	**Inconclusive**	
				varies by hardness **(A&Wc chronic)**	**256**	**1 of 1 event**	**Inconclusive**	
Cash Mine Creek, unnamed tributary of headwaters - Cash Mine Creek AZ15070103-415 A&Wc, FC, FBC (tributary rule)	Weston Solutions for EPA Below adit, Above McCleur tailings MGUCM000.19	2001 - 1 metals suite (total only)	Lead (total) µg/L	15 (FBC)	38.5	1 of 1		Missing core parameters: dissolved oxygen, *Escherichia coli*, pH, turbidity/SSC. Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
	Weston Solutions for EPA At base of McCleur tailings MGUCM000.10	2001 - 1 metals suite (dissolved only)	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	62.3	1 of 1		
				varies by hardness (A&Wc chronic)	62.3	1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	1080	1 of 1		
				varies by hardness (A&Wc chronic)	1080	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	5320	1 of 1		
				varies by hardness (A&Wc chronic)	5320	1 of 1		

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive	2001 2 samples 1 sampling event	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	62.3	1 of 1 event (in 2001)	Inconclusive	Insufficient monitoring data to assess. Placed on the Planning List due to cadmium, copper, lead, and zinc exceedances.
				varies by hardness (A&Wc chronic)	62.3	1 of 1 event (insufficient events)	Inconclusive	
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	1080	1 of 1 event (in 2001)	Inconclusive	
				varies by hardness (A&Wc chronic)	1080	1 of 1 event (insufficient events)	Inconclusive	
			Lead (total) µg/L	15 (FBC)	38.5 - 60.6	1 of 1	Inconclusive	
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	5320	1 of 1 event (in 2001)	Inconclusive	
				varies by hardness (A&Wc chronic)	5320	1 of 1 event (insufficient events)	Inconclusive	
Cave Creek headwaters - Cave Creek Dam AZ15060106B-026A A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Near Ashdale Station, Below Seven Springs MGCVE028.41 100527	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	ADEQ Ambient Monitoring Above Maricopa Mine, Below inactive mine workings MGCVE022.02 101305	2001 - 1 full suite 2002 - 2 full suites	No exceedances					
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgL Attaining	2001 - 2002 7 samples 5 sampling events	No exceedances					ADEQ collected 5 samples at 2 sites in 1998 - 2002. Assessed as "attaining all uses."
Consolidated Canal 15060106B - above WTP intake ~~AZ15060100-014A~~ DWS, AgI, AgL	SRP Routine Monitoring At Pecos Road (Chandler Water Treatment Plant) MGCNC010.03 SVCA 5-14.0	1998 - 12 partial suites 1999 - 12 partial suites ~~2000 - 11 partial suites~~ 2001 - 12 partial suites 2002 - 12 partial suites	No exceedances					

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row DWS Inconclusive AgI Inconclusive AgL Inconclusive	**1998 - 2002** **59 sampling events**	**No exceedances**					**SRP collected 59 samples in 1998 - 2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).**
Eastern Canal WTP below Warner Rd. - terminus AZ15050100-207B AgI, AgL	SRP Routine Monitoring At lateral 14.5 MGESC012.35 SVCA 4-14.2	1998 - 10 partial suites 1999 - 8 partial suites 2000 - 10 partial suites 2001 - 10 partial suites 2002 - 11 partial suites	No exceedances					
	SRP Routine Monitoring At Warner Ave, Tempe MGESC012.13 SVCA 4-11.0	1998 - 12 partial suites 1999 - 11 partial suites 2000 - 10 partial suites 2001 - 11 partial suites 2002 - 12 partial suites	No exceedances					
	SRP Routine Monitoring At Guadalupe (Gilbert Water Treatment Plant) MGESC007.31 SVCA 4-9.0	1998 - 12 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 12 partial suites 2002 - 12 partial suites	No exceedances					
	Summary Row AgI Inconclusive AgL Inconclusive	**1998 - 2002** **164 samples** **59 sampling events**	**No exceedances**					**SRP collected 164 samples at 3 sites in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).**
French Gulch headwaters - Hassayampa River AZ15070103-239 A&Ww, FC, FBC (tributary rule)	Arimetco, Inc. Compliance monitoring Above Zonia Gulch (FGAZG) MGFRG9.84 101619	1998 - 11 metals suites 1999 - 8 metals suites 2000 - 11 field + metals 2001 - 26 field + metals 2002 - 7 field	Arsenic (total) µg/L	50 (FBC)	<40 - 74	1 of 35		
			Copper (total) µg/L	1300 (FBC)	19 - 1600	1 of 36		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 300	23 of 36		
				varies by hardness (A&Ww chronic)	<10 - 300	23 of 36		
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 300	26 of 36		
			Lead (total) µg/L	15 (FBC)	<2 - 20	1 of 35		
			Mercury (total) µg/L	0.6 (FC)	0.2 - 1.7	1 of 36		

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<50 - 1100	20 of 36		
				varies by hardness (A&Ww chronic)	<50 - 1100	20 of 36		
	Arimetco, Inc. Compliance monitoring and ADEQ TMDL Program Below Zonia Gulch (FGBZG and FGBZG+85) MGFRG008.17 101620	1998 - 6 field, 10 metals 1999 - 1 field, 8 metals 2000 - 11 field + metals 2001 - 28 field, 7 metals 2002 - 12 field	Arsenic (total) µg/L	50 (FBC)	<5 - 94	1 of 43		
			Cadmium (dissolved) µg/L	varies by hardness (A&Ww chronic)	<1 - 9	3 of 25		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 1200	25 of 48		
				varies by hardness (A&Ww chronic)	<10 - 1200	33 of 48		
			Copper (total) µg/L	1300 (FBC)	<10 - 1400	1 of 49		
			Mercury (total) µg/L	0.6 (FC)	<0.2 - 1.1	1 of 42		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<50 - 2200	27 of 48		
				varies by hardness (A&Ww chronic)	<50 - 2200	27 of 48		
	Arimetco, Inc. Compliance monitoring and ADEQTMDL Program Above Placerita Gulch (FGAPG) MGFRG004.96 100649	1998 - 1 field, 2 metals 1999 - 1 field, 2 metals 2000 - 1 field, 3 metals 2001 - 2 metals 2002 - 1 field, metals	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 33	2 of 10		
			Mercury (total) µg/L	0.6 (FC)	<0.2 - 1.7	1 of 10		
	Arimetco, Inc. Compliance monitoring and ADEQ TMDL Program Below Placerita Gulch (FGBPG) MGFRG004.87 100650	1998 - 2 field, metals 1999 - 1 field, 3 metals 2000 - 1 field, 3 metals 2001 - 1 field, 2 metals 2002 - 1 field, metals	Mercury (total) µg/L	0.6 (FC)	<0.2 - 1.9	1 of 11		

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Attaining FBC Inconclusive	1998 - 2002 153 samples 69 sampling events	Arsenic (total) µg/L	50 (FBC)	<5 - 94	2 of 101	Attaining	Arimetco collected 146 samples at 4 sites in 1998-2002. ADEQ's TMDL Program collected 7 samples at 3 of these sites in 2001-2002. Assessed as "impaired" due to copper and zinc exceedances. Placed on the Planning List due to missing core parameters: dissolved oxygen, *Escherichia coli*, and turbidity/SSC. (Due to changes in the tributary rule, AgI and AgL uses no longer apply to this reach.)
			Cadmium (dissolved) µg/L	varies by hardness (A&Ww chronic)	<1 - 9	3 of 66 samples 3 of 50 events (6% exceed)	Attaining	
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 1200	48 of 106 samples 27 of 50 events	Impaired	
				varies by hardness (A&Ww chronic)	<10 - 1200	61 of 106 samples 38 of 50 events (76% exceed)	Impaired	
			Copper (total) µg/L	1300 (FBC)	<10 - 1600	2 of 107	Attaining	
			Lead (total) µg/L	15 (FBC)	<2 - 20	1 of 93	Attaining	
			Mercury (total) µg/L	0.6 (FC)	<0.2 - 1.7	4 of 100	Attaining	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	40 - 2260	47 of 105 samples 29 of 50 events	Impaired	
				varies by hardness (A&Ww chronic)	40 - 2260	47 of 105 samples 29 of 50 events (58% exceed)	Impaired	
Gila River San Pedro - Mineral Creek AZ15050100-008 A&Ww, FC, FBC, AgI, AgL	USGS NAWQA Site #09474000 At Kelvin MGGLR136.90 100748	1998 - 6 partial suites 2001 - 2 full suites 2002 - 4 full suites	Turbidity NTU	50 (A&Ww)	1 - 72	2 of 6	Inconclusive	
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998 - 2002 12 sampling events	Turbidity NTU	50 (A&Ww)	1 - 72	2 of 6	Inconclusive (see comment)	USGS collected 12 samples in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to exceedances of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Gila River Salt River - Agua Fria River AZ15070101-015 A&Wedw, FC, PBC, AgI, AgL	ADEQ Ambient Monitoring Above El Mirage Road MGGLR095.61 101264	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	Summary Row A&Wedw Attaining FC Impaired* PBC Attaining AgI Attaining AgL Attaining	2001 - 2002 4 sampling events	No exceedances					ADEQ collected 4 samples in 2001-2002. Assessed as "impaired" due to DDT, toxaphene, and chlordane in fish tissue. *EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. Once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate these parameters are no longer a concern in fish tissue (fish consumption advisory is removed).
Gila River Agua Fria River - Waterman Wash AZ15070101-014 A&Wedw, FC, PBC, AgI, AgL	USGS NAWQA Site #09514100 At Estrella Parkway MGGLR093.66 101495	1998 - 1 partial suite	No exceedances					
	Summary Row A&Wedw Inconclusive FC Impaired* PBC Inconclusive AgI Inconclusive AgL Inconclusive	1998 1 sampling event	No exceedances					Assessed as "impaired" due to DDT, toxaphene, and chlordane in fish tissue. *EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. Once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate these parameters are no longer a concern in fish tissue (fish consumption advisory is removed).
Gila River Centennial Wash - Gillespie Dam AZ15070101-008 A&Wedw, FC, PBC, AgI, AgL	USGS Station #09518000 Above Gillespie Dam diversion MGGLR075.86 100734	1998 - 6 full suites 1999 - 5 full suites 2000 - 4 full suites 2001 - 4 full suites 2002 - 4 full suites	Boron (total) µg/L	1000 (AgI)	370 - 2700	22 of 23		
			Escherichia coli CFU/100 ml	576 (PBC)	15 - 870	1 of 22		
			Selenium (total) µg/L	2 (A&Wedw chronic)	<1 - 15.5	18 of 23		
			Turbidity NTU	50 (A&Wedw)	0.34 - 95	5 of 23		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wedw Impaired FC Impaired* PBC Attaining AgI Impaired AgL Attaining	1998 - 2002 23 sampling events	Boron (total) µg/L	1000 (AgI)	370 - 2700	22 of 23	Impaired	USGS collected 23 samples in 1998-2002. Assessed as "impaired" due to boron and selenium exceedances and due to DDTs, toxaphene, and chlordane in fish tissue. *EPA placed this reach on the 2002 303(d) List because DDT metabolitee, toxephene, and chlordane in fish tissue led to a fish consumption advisory. Once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate these parameters are no longer a concern in fish tissue (fish consumption advisory is removed). Turbidity exceedances indicate impairment based on the former standard. Assessed as "not attaining" for turbidity until sufficient turbidity or suspended sediment concentration data are collected to make an assessment of "attaining" or "impaired." Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
			Escherichia coli CFU/100 ml	576 (PBC)	15 - 870	1 of 22 events (not in the last 3 years of sampling)	Attaining	
			Selenium (total) µg/L	2 (A&Wedw chronic)	<1 - 15.5	18 of 23 samples 18 of 23 events (78% exceed)	Impaired	
			Turbidity NTU	50 (A&Wedw)	0.34 - 95	5 of 23	Not attaining (see comment)	
Grand Canal HUC boundary 15070101 - New River AZ15070102-250 AgI, AgL	SRP Routine Monitoring At 99th Ave, Phoenix SVLT 2-23-0 MGGRC000.70	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 11 partial suites 2002 - 11 partial suites	No exceedances					
	Summary Row AgI Inconclusive AgL Inconclusive	1998 - 2002 55 sampling events	No exceedances					SRP collected 55 samples in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: field pH and total metals (copper, lead, and manganese).

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Hassayampa River headwaters - Copper Creek AZ15070103-007A A&Wc, FC, FBC, AgI, AgL	ADEQ TMDL Program At headwaters MGHSR112.14 101151	2001 - 1 partial suite	pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	5.5	1 of 1		Lab reporting limits for 1 dissolved cadmium and copper sample were too high to use results for assessment.
	ADEQ TMDL Program Aspen - Below spring MGHSR111.45 101005	2000 - 1 partial suite 2001 - 3 partial suites	Dissolved oxygen mg/L	>7.0 (90%saturation) (A&Wc)	6.5 - 9.7 (65 - 97%)	1 of 3		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment. Lab reporting limits for 4 dissolved cadmium and copper samples were too high to use results for assessment.
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	5.3 - 6.3	3 of 4		
	ADEQ TMDL Program McKinley Millsite - at Babble MGHSR110.65 100942	2000 - 2 partial suites 2001 - 6 partial suites	Cadmium (dissolved) µg/L	varies by hardness (A&Wc chronic)	<4 - 5	1 of 2		Lab reporting limits for 6 other dissolved cadmium samples were too high to use results for assessment.
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	25 - 90	8 of 8		
				varies by hardness (A&Wc chronic)	25 - 90	8 of 8		
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	5.8 - 7.1	1 of 8		
			Zinc (dissolved) µg/l	varies by hardness (A&Wc acute)	40 - 560	8 of 8		
				varies by hardness (A&Wc chronic)	40 - 560	8 of 8		
	ADEQ TMDL Program Above McCleur tributary MGHSR109.98 101067	2000 - 1 partial suite 2001 - 6 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	<10 - 27	3 of 4		Lab reporting limits for 3 other copper samples were too high to use results for assessment.
				varies by hardness (A&Wc chronic)	<10 - 27	3 of 4		
	ADEQ TMDL Program At McCleur tributary MGHSR109.96 101066	2000 - 1 partial suite 2001 - 6 partial suites	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	20 - 37	7 of 7		Lab reporting limits for 6 other cadmium samples were too high to use results for assessment.
				varies by hardness (A&Wc chronic)	20 - 37	7 of 7		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	1400 - 4077	7 of 7		
				varies by hardness (A&Wc chronic)	1400 - 4077	7 of 7		
			Copper (total) µg/L	500 (AgL)	1530 - 2832	6 of 6		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
				1300 (FBC)	1530 - 2832	6 of 6		
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	3.4 - 4.1	6 of 6		
				4.5 - 9.0 (AgI)	3.4 - 4.1	6 of 6		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	1020 - 3070	7 of 7		
				varies by hardness (A&Wc chronic)	1020 - 3070	7 of 7		
	ADEQ TMDL Program Below McCleur tributary MGHSR109.95 101065	2000 - 1 partial suite 2001 - 5 partial suites	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	<5 - 11	2 of 3		Lab reporting limits for 4 dissolved cadmium samples were too high to use results for assessment.
				varies by hardness (A&Wc chronic)	<5 - 11	2 of 2		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	146 - 575	6 of 6		
				varies by hardness (A&Wc chronic)	146 - 575	6 of 6		
			Copper (total) µg/L	500 (AgL)	334 - 976	1 of 4		
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	5.4 - 6.8	3 of 6		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	390 - 870	6 of 6		
				varies by hardness (A&Wc chronic)	390 - 870	6 of 6		
	ADEQ TMDL Program and Weston Solutions for EPA Above Senator mine MGHSR109.78 101037	2000 - 1 partial suite 2001 - 6 partial suites	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	<4 - 19	3 of 5		Lab reporting limits for some dissolved cadmium samples were too high to use results for assessment. Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
				varies by hardness (A&Wc chronic)	<4 - 19	2 of 3		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	30 - 1300	7 of 7		
				varies by hardness (A&Wc chronic)	30 - 1300	7 of 7		
			Copper (total) µg/L	500 (AgL)	116 - 1620	2 of 5		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	6.0 - 6.9	2 of 5		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	70 - 1030	7 of 7		
				varies by hardness (A&Wc chronic)	70 - 1030	7 of 7		
	ADEQ TMDL Program and Weston Solutions for EPA At Senator mine MGHSR109.75 101084	2001 - 6 partial suites	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	22.9 - 161	6 of 6		Lab reporting limits for some dissolved cadmium samples were too high to use results for assessment. Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
				varies by hardness (A&Wc chronic)	22.9 - 161	6 of 6		
			Cadmium (total) µg/L	50 (AgI, AgL)	33 - 157	1 of 5		
				84 (FC)	33 - 157	1 of 5		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	<10 - 73.1	1 of 5		
				varies by hardness (A&Wc chronic)	<10 - 73.1	2 of 5		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	2040 - 13,000	6 of 6		
				varies by hardness (A&Wc chronic)	2040 - 13,000	6 of 6		
			Zinc (total) µg/L	10,000 (AgI)	3350 - 15,300	1 of 5		
	ADEQ TMDL Program and Weston Solutions for EPA Downstream of Senator Mine MGHSR109.68 101036	2000 - 2 partial suites 2001 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	8 - 34	5 of 6		Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
				varies by hardness (A&Wc chronic)	8 - 34	6 of 6		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	12 - 348	4 of 6		
				varies by hardness (A&Wc chronic)	12 - 348	6 of 6		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	720 - 3450	6 of 6		
				varies by hardness (A&Wc chronic)	720 - 3450	6 of 6		

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ TMDL Program At Whispering Pines MGHSR108.17 100941	2000 - 2 partial suites 2001 - 5 partial suites	Dissolved oxygen mg/L	>7.0 (90% saturation) (A&Wc)	5.1 - 10.8 64 - 105%	1 of 5		Lab reporting limit for dissolved cadmium were too high on 1 sample to use results for assessment. Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	<5 - 7	2 of 7		
				varies by hardness (A&Wc chronic)	<5 - 7	6 of 6		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	<10 - 207	4 of 7		
				varies by hardness (A&Wc chronic)	<10 - 207	5 of 7		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	330 - 680	7 of 7		
				varies by hardness (A&Wc chronic)	330 - 680	7 of 7		
	ADEQ TMDL Program At Jersey MGHSR105.37 101195	2001 - 1 partial suite	No exceedances					Lab reporting limits for dissolved cadmium were too high to use results for assessment.
	Summary Row A&Wc Not attaining FC Not attaining FBC Not attaining Agl Not attaining AgL Not attaining	2000 - 2001 57 samples 10 sampling events	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	<4 - 161	26 of 39 samples 8 of 10 events (in 2000-2001)	Not attaining	ADEQ collected 57 samples at 11 sites in 2000 - 2001. TMDLs for cadmium, copper, pH, and zinc were approved by EPA in 2002. Assessed as "not attaining" due to cadmium, copper, pH, and zinc exceedances. Although current cadmium data are inconclusive, reach will remain "not attaining" for for all parameters addressed in the TMDL until data indicate designated uses are being attained. Placed on the Planning List for TMDL follow up monitoring and missing core parameters: *Escherichia coli*, turbidity/SSC, total boron, and total metals (mercury, manganese, copper, and lead).
				varies by hardness (A&Wc chronic)	<4 - 161	30 of 32 samples 10 of 10 events (100% exceed)	Not attaining	
			Cadmium (total) µg/L	50 (Agl, AgL)	33 - 157	1 of 5	Inconclusive (Not attaining)	
				84 (FC)	33 - 157	1 of 5	Inconclusive (Not attaining)	
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	<10 - 1300	38 of 50 samples 9 of 10 events (in 2000-2001)	Not attaining	
				varies by hardness (A&Wc chronic)	<10 - 2300	41 of 49 samples 9 of 10 events (90% exceed)	Not attaining	
			Copper (total) µg/L	1300 (FBC)	116 - 2832	6 of 48	Attaining	
				500 (AgL)	116 - 2832	9 of 48	Not attaining	

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	5.3 - 8.36	16 of 52	Not attaining	
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	<20 - 13,000	46 of 59 samples 10 of 10 events (in 2000-2001)	Not attaining	
				varies by hardness (A&Wc chronic)	<20 - 13,000	46 of 59 samples 10 of 10 events (100% exceed)	Not attaining	
Hassayampa River Copper Creek - Blind Indian Creek AZ15070103-007B A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program Intermittent Site MGHSR93.19 101193	2001 - 1 partial suite	No exceedances					
	ADEQ TMDL Program At gaging station MGHSR089.37 100940	2000 - 2 field 2001 - 4 partial suites	No exceedances					Lab reporting limits for dissolved cadmium were too high to use results for assessment.
	ADEQ TMDL Program Below French Gulch at confluence with Milk Creek MGHSR83.47 101128	2001 - 4 partial suites	No exceedances					Lab reporting limits for dissolved cadmium were too high to use results for assessment.
	ADEQ Fixed Station Network Near Wagoner, Below Milk Creek MGHSR063.02 100464	1999 - 4 full suites 2000 - 3 full suites 2001 - 4 full suites 2002 - 4 full suites	Arsenic (total) µg/L	50 (FBC)	<10 - 67	1 of 15		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment. All exceedances except *Escherichia coli* and dissolved oxygen occurred following monsoon rains.
			Chromium (total) µg/L	100 (FBC)	<10 - 170	1 of 15		
			Copper (total) µg/L	500 (AgL)	<10 - 1100	1 of 15		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	2.6 - 10.7 (30 - 128%)	3 of 15		
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 530	1 of 12		
			Lead (total) µg/L	100 (AgL)	<5 - 150	1 of 15		
				15 (FBC)	<5 - 150	1 of 15		
			Turbidity NTU	50 (A&Ww)	0.58 - >1000	1 of 13		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ TMDL Program At Blind Indian Creek MGHSR081.07 101003	2000 - 1 field, cadmium, copper, zinc 2001 - 4 field, cadmium, copper, zinc	Cadmium (dissolved) µg/L	varies by hardness (A&Ww chronic)	<1 - 7.0	1 of 5		Lab reporting limits for 4 other dissolved cadmium samples were too high to use results for assessment.
	Summary Row A&Ww Attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	**1999 - 2002** **30 samples** **27 sampling events**	**Arsenic (total)** **µg/L**	**50 (FBC)**	**<10 - 67**	**1 of 15**	**Attaining**	**ADEQ collected 30 samples at 5 sites in 1999 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to *Escherichia coli* exceedance.**
			Cadmium (dissolved) **µg/L**	**varies by hardness (A&Ww chronic)**	**<1 - 7.0**	**1 of 16 samples 1 of 16 events (6% exceed)**	**Attaining**	
			Chromium (total) **µg/L**	**100 (FBC)**	**<10 - 170**	**1 of 15**	**Attaining**	
			Copper (total) **µg/L**	**500 (AgL)**	**<10 - 1100**	**1 of 15**	**Attaining**	
			Escherichia coli **CFU/100 ml**	**235 (FBC)**	**<2 - 530**	**1 of 12 samples 1 of 12 events (in 2001)**	**Inconclusive**	
			Lead (total) **µg/L**	**100 (AgL)**	**<5 - 150**	**1 of 15**	**Attaining**	
				15 (FBC)	**<5 - 150**	**1 of 15**	**Attaining**	
			Turbidity **NTU**	**50 (A&Ww chronic)**	**0.58 - >1000**	**1 of 13**	**Attaining**	
Hassayampa River Cottonwood Creek - Martinez Wash AZ15070103-004 A&Ww, FC, FBC, AgI, AgL	ADEQ and USGS Ambient Monitoring At Box Canyon Dam MGHSR049.89 100463	1999 - 4 full suites 2000 - 4 full suites 2001 - 4 full suites 2002 - 4 full suites	Arsenic (total) µg/L	50 (FBC)	<10 - 53	1 of 15		
			Chromium (total) µg/L	100 (FBC)	<10 - 200	1 of 15		
			Copper (total) µg/L	500 (AgL)	<10 - 610	1 of 15		
			Escherichia coli CFU/100 ml	235 (FBC)	2 - 11,400	1 of 14		
			Lead (total) µg/L	100 (AgL)	<5 - 100	1 of 15		
				15 (FBC)	<5 - 100	1 of 15		
			Turbidity NTU	50 (A&Ww)	0.8 - >1000	2 of 15		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining	1999 - 2002 16 sampling events	Arsenic (total) µg/L	50 (FBC)	<10 - 53	1 of 15	Attaining	ADEQ and USGS collected 16 samples in 1999-2002. Assessed as "attaining all uses."
			Chromium (total) µg/L	100 (FBC)	<10 - 200	1 of 15	Attaining	
			Copper (total) µg/L	500 (AgL)	<10 - 610	1 of 15	Attaining	
			Escherichia coli CFU/100 ml	235 (FBC)	2 - 11,400	1 of 14 (Not in the last 3 years of sampling)	Attaining	
			Lead (total) µg/L	100 (AgL)	<5 - 100	1 of 15	Attaining	
				15 (FBC)	<5 - 100	1 of 15	Attaining	
			Turbidity NTU	50 (A&Ww)	0.8 - >1000	2 of 15	Attaining	
Hassayampa River Sols Wash - 8 miles below Wickenburg AZ15070103-002A A&Ww, FC, FBC, AgL, AgI	ADEQ Ambient Monitoring At Nature Conservancy near Wickenburg MGHSR042.28 100462	2001 - 1 full suite 2002 - 2 full suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	2.94 - 3.38	3 of 3		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Escherichia coli CFU/100 mL	235 (FBC)	4 - 590	1 of 3		
	Summary Row A&Ww Attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	2001 - 2002 3 sampling events	*Escherichia coli* CFU/100 mL	235 (FBC)	4 - 590	1 of 3 events (in 2002)	Inconclusive	ADEQ collected 3 samples in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to *Escherichia coli* exceedance.
Hassayampa River Buckeye Canal - Gila River AZ15070103-001B A&Ww, FC, FBC, AgL	USGS NAWQA Site #09517000 Near Arlington MGHSR001.56	1998 - 4 partial suites	DDE µg/L	0.001 (FC, AgL)	0.003 - 0.010	2 of 4		2 other samples exceeded the DDE standard, but the values were estimated.
	ADEQ Ambient Monitoring Above Gila River MGHSR000.23 ~~101197~~	2001 - 1 full suite 2002 - 3 full suites	Turbidity NTU	50 (A&Ww)	18.1 - 110	1 of 4		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Inconclusive FC Impaired* FBC Attaining AgL Inconclusive	1998 - 2002 8 sampling events	DDE µg/L	0.001 (FC, AgL)	0.003 - 0.010	2 of 4	Inconclusive (Impaired)	ADEQ and USGS collected 8 samples in 1998 - 2002. Assessed as "impaired" due to DDT, toxaphene, and chlordane in fish tissue. *EPA placed this reach on the 2002 303(d) List because DDT metabolites (DDE), toxaphene, and chlordane in fish tissue led to a fish consumption advisory. Once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate these parameters are no longer a concern in fish tissue (fish consumption advisory is removed). Placed on the Planning List due to exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle in this watershed.
			Turbidity NTU	50 (A&Ww)	18.1 - 110	1 of 4	Inconclusive (see comment)	
Hassayampa River, unnamed tributary to 007A headwaters - Hassayampa River AZ15070103-417 A&Wc, FC, FBC (tributary rule)	Weston Solutions for EPA Background sample MGUHS000.12	2001 - 1 dissolved metals suite	Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	27.7	1 of 1		Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
				varies by hardness (A&Wc chronic)	27.7	1 of 1		
	Summary Row A&Wc Not attaining FC Inconclusive FBC Inconclusive	2001 1 sampling event	Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	27.7	1 of 1 event (in 2001)	Inconclusive (Not attaining)	Insufficient monitoring data to assess. Copper loadings from this reach were addressed in the TMDL for the Hassayampa River approved by EPA in 2002. The reach will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.
				varies by hardness (A&Wc chronic)	27.7	1 of 1 event (insufficient events)	Inconclusive (Not attaining)	
Indian Bend Wash headwaters - Salt River AZ15060106B-179 A&We, PBC	USGS At 40th Street MGIBW001.43 101520	2001 - 1 field, metals 2002 - 2 field, metals	Lead (total) µg/L	15 (PBC)	10 - 38	1 of 3		
	USGS At Curry Road MGIBW000.23 101492	1998 - 3 partial suites	No exceedances					

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row **A&We Inconclusive** **PBC Inconclusive**	**1998 - 2002** **6 sampling events**	**Lead (total)** **µg/L**	**15** **(PBC)**	**10 - 38**	**1 of 3**	**Inconclusive**	**USGS collected 6 samples at 2 sites in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to lead exceedance and missing core parameters: dissolved metals (cadmium, copper, zinc).**
Little Ash Creek headwaters - Ash Creek AZ15070102-039 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Near Estler Peak MGLAS003.16 100578	1998 - 1 partial suite 2002 - 1 full suite	No exceedances					
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998 - 2002** **2 sampling events**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Lynx Creek, unnamed tributary of headwaters - Lynx Creek AZ15070102-124 A&Wc, FC, FBC (tributary rule)	Weston Solutions for EPA Above Blue John Creek MGULN000.13	2001 - 1 dissolved metals suite	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	42.2	1 of 1		Missing core parameters: dissolved oxygen, *Escherichia coli*, pH, and turbidity/SSC Additional samples taken by Weston Solutions showed exceedances but were not used in this assessment. QA/QC protocols were not fulfilled and resulted in estimated values.
				varies by hardness (A&Wc chronic)	42.2	1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	1090	1 of 1		
				varies by hardness (A&Wc chronic)	1090	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	3010	1 of 1		
				varies by hardness (A&Wc chronic)	3010	1 of 1		
	Weston Solutions for EPA At Blue John Creek MGULN000.11	2001 - 1 dissolved metals suite	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	40.7	1 of 1		
				varies by hardness (A&Wc chronic)	40.7	1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	826	1 of 1		
				varies by hardness (A&Wc chronic)	826	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	2820	1 of 1		
				varies by hardness (A&Wc chronic)	2820	1 of 1		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Weston Solutions for EPA Below Blue John Creek MGULN000.07	2001 - 1 dissolved metals suite	Cadmium (dissolved) µg/L	varies by hardness (A&Wc acute)	39	1 of 1		
				varies by hardness (A&Wc chronic)	39	1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	585	1 of 1		
				varies by hardness (A&Wc chronic)	585	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Wc acute)	2630	1 of 1		
				varies by hardness (A&Wc chronic)	2630	1 of 1		
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**2001** **3 samples** **1 sampling event**	**Cadmium (dissolved) µg/L**	**varies by hardness (A&Wc acute)**	**39 - 42.2**	**3 of 3 samples 1 of 1 event (in 2001)**	**Inconclusive**	**Insufficient monitoring data to assess.** **Placed on the Planning List due to cadmium, copper, and zinc exceedances.**
				varies by hardness (A&Wc chronic)	**39 - 42.2**	**3 of 3 samples 1 of 1 event (insufficient events)**	**Inconclusive**	
			Copper (dissolved) µg/L	**varies by hardness (A&Wc acute)**	**585 - 1090**	**3 of 3 samples 1 of 1 event (in 2001)**	**Inconclusive**	
				varies by hardness (A&Wc chronic)	**585 - 1090**	**3 of 3 samples 1 of 1 event (insufficient events)**	**Inconclusive**	
			Zinc (dissolved) µg/L	**varies by hardness (A&Wc acute)**	**2630 - 3010**	**3 of 3 samples 1 of 1 event (in 2001)**	**Inconclusive**	
				varies by hardness (A&Wc chronic)	**2630 - 3010**	**3 of 3 samples 1 of 1 event (insufficient events)**	**Inconclusive**	

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Martinez Canyon headwaters - Box Canyon AZ15050100-080 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring MGMZC004.21 101349	2002 - 1 full suite	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	3.07	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**2002** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Mineral Creek Devils Canyon - Gila River AZ15050100-012B A&Ww, FC, FBC, AgL	ASARCO Consent Decree Monitoring At Indian Gardens (Above mine) (Site IG) MGMIN007.55	1998 - 12 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 8 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<20 - 24	1 of 41		
				varies by hardness (A&Ww chronic)	<20 - 24	2 of 41		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	3.5 - 15.2	10 of 41		
			Lead (total) µg/L	15 (FBC)	<2 - 54	1 of 41		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2 - 3.5	1 of 41		
			Turbidity NTU	50 (A&Ww)	0.5 - 960	7 of 41		
	ASARCO Consent Decree Monitoring Mineral Creek Diversion Tunnel Inlet (Site MCTI) MGMIN005.77	2001 - 12 partial suites 2002 - 8 partial suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	2.8 - 7.3	15 of 22		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment. Sampling ended at this site in September, 2002. Water was diverted from the area after new tunnel extension. Additional samples taken 1998 - 2000. See comment in summary row.
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 21	1 of 20		
				varies by hardness (A&Ww chronic)	<10 - 21	1 of 20		
	ASARCO Consent Decree Monitoring Mineral Creek Diversion Tunnel Outlet (Site MCTO) MGMIN004.74	2001 - 11 partial suites 2002 - 11 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 25	1 of 22		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment. Additional samples taken 1998 - 2000. See comment in summary row.
				varies by hardness (A&Ww chronic)	<10 - 25	2 of 22		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.4 - 9.4	2 of 21		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2.0 - 8.7	17 of 22		
	ASARCO Consent Decree Monitoring Channel Outlet (Site Surf 8w) MGMIN002.21	2001 - 8 partial suites 2002 - 11 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 27	1 of 19		Additional samples taken 1998 - 2000. See comment in summary row.
				varies by hardness (A&Ww chronic)	<10 - 27	1 of 19		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.37 - 11.28	2 of 18		
			Selenium µg/L	2.0 (A&Ww chronic)	<2.0 - 8.4	16 of 19		
	ASARCO Consent Decree Monitoring Below highway bridge 177 (Site Min-1) MGMIN001.35	2002 - 1 partial suite	Copper µg/L	varies by hardness (A&Ww acute)	<10 - 32	1 of 19		
				varies by hardness (A&Ww chronic)	<10 - 32	1 of 19		
			Selenium µg/L	2.0 (A&Ww chronic)	<2.0 - 3.1	1 of 7		

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Inconclusive FBC Inconclusive AgL Attaining	1998 - 2002 103 samples 41 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<20 - 24	1 of 41 events (in 2001)	Inconclusive (Impaired)	ASARCO collected 103 samples in 2001 - 2002. Assessed as "impaired" due to copper and selenium exceedances. Although current copper data are inconclusive, the reach is assessed as "impaired" until a TMDL is complete or copper data indicate designated uses are being "attained." ASARCO began diverting water in 2001. Prior to diversion, exceedances occurred for cadmium, copper, lead, nickel, pH, turbidity, and zinc, in addition to selenium. Water quality significantly improved beginning in January 2001, except for selenium. Therefore, exceedances before the water diversion were not considered in this assessment. On the Planning List due to exceedances of the former turbidity standard and missing core parameters: *Escherichia coli* and total mercury. Turbidity exceedances appear to be a problem only at the Indian Gardens site above the treatment. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
				varies by hardness (A&Ww chronic)	<20 - 24	2 of 41 events (5% exceed)	Attaining	
			Lead (total) µg/L	15 (FBC)	<2 - 54	1 of 103	Attaining	
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2 - 3.5	19 of 41 events (46% exceed)	Impaired	
			Turbidity NTU	50 (A&Ww)	0.5 - 960	7 of 103 7 of 41 above treatment	Inconclusive (see comment)	
New River headwaters - Interstate 17 AZ15070102-006A A&Ww, FC, FBC, AgI, AgL	ADEQ Biocriteria Program Above Burnt Hole Canyon MGNWR040.70 100604	1998 - 1 partial suite	No exceedances					
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive	1998 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.

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TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Queen Creek headwaters - Superior Mine WWTP AZ15050100-014A A&We, PBC, AgL	BHP Copper Consent Decree Monitoring Above mine discharge AMP1	1998 - 3 field, metals 2000 - 1 field, metals 2001 - 4 field, metals	Copper (dissolved) µg/L	varies by hardness (A&We)	<20 - 30	1 of 8		
	Summary Row **A&We Impaired** **PBC Attaining** **AgL Inconclusive**	**1998 - 2001** **8 sampling events**	**Copper (dissolved) µg/L**	**varies by hardness (A&We)**	**<20 - 30**	**1 of 8 events (in 2000)**	**Inconclusive (Impaired)**	**BHP collected 8 samples in 1998-2001. Assessed as "impaired" in 2002 due to copper exceedances.** **Reach was on 2002 303(d) List for copper. Although current copper data are inconclusive, the reach will remain "impaired" until a TMDL is complete or copper data indicate designated uses are being attained.** **ADEQ investigation indicates that the reach may be intermittent rather than ephemeral, and therefore, more stringent water quality standards should be adopted for this reach.** **Also placed on the Planning List due to missing core parameters: dissolved cadmium and total lead.**
Queen Creek Superior Mining WWTP - Potts Cyn AZ15050100-014B A&Wedw, PBC	BHP Copper Consent Decree Monitoring Below mine discharge AMP2	1998 - 3 partial suites 2000 - 1 partial suites 2001 - 4 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Wedw acute)	<20 - 30	1 of 8		
				varies by hardness (A&Wedw chronic)	<20 - 30	1 of 8		
	ADEQ Ambient Monitoring Above Boyce-Thompson Arboretum MGQEN028.97 100624	2002 - 1 full suite	Copper (dissolved) µg/L	varies by hardness (A&Wedw acute)	50	1 of 1		
				varies by hardness (A&Wedw chronic)	50	1 of 1		
			Selenium (total) µg/L	2.0 (A&Wedw chronic)	5.8	1 of 1		
	Summary Row **A&Wedw Impaired** **PBC Inconclusive**	**1998 - 2002** **9 sampling events**	**Copper (dissolved) µg/L**	**varies by hardness (A&Wedw acute)**	**<20 - 50**	**2 of 9 samples 2 of 9 events (in 2000 and 2002)**	**Impaired**	**BHP and ADEQ collected 9 samples in 1998-2002. Assessed as "impaired" due to copper exceedances.** **Placed on the Planning List due to selenium exceedance and missing core parameters: dissolved cadmium, *Escherichia coli*, and total lead.**
				varies by hardness (A&Wedw chronic)	**<20 - 50**	**2 of 9 samples 2 of 9 events (insufficient events)**	**Inconclusive**	
			Selenium (total) µg/L	**varies by hardness (A&Wedw chronic)**	**5.8**	**1 of 1 sample 1 of 1 event (insufficient events)**	**Inconclusive**	

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Salt River 2 km below Granite Reef dam - Interstate 10 bridge AZ15060106B-001B A&We, PBC	USGS At Priest Drive near Phoenix MGSLR013.74 101493	1998 - 1 partial suite	No exceedances					
	Summary Row A&We Inconclusive PBC Inconclusive	1998 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Salt River 23rd Ave WWTP - Gila River AZ15060106B-001D A&Wedw, FC, PBC, AgI, AgL	USGS NAWQA Site #09512407 Below Tres Rios discharge MGSLR001.88 101265	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	Summary Row A&Wedw Attaining FC Impaired* PBC Attaining AgI Attaining AgL Attaining	2001 - 2002 4 sampling events	No exceedances					USGS collected 4 samples in 2001-2002. Assessed as "impaired" due to DDT, toxaphene, and chlordane in fish tissue. *EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. Once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate these parameters are no longer a concern in fish tissue (fish consumption advisory is removed).
South Canal Granite Reef Dam - Consolidated Canal AZ15060106B-180 DWS, AgI, AgL	SRP Routine Monitoring At division gates MGSOC006.83 SVCA 3-3.3	1998 - 10 partial suites 1999 - 11 parial suites 2000 - 11 partial suites 2001 - 12 partial suites 2002 - 11 partial suites	No exceedances					
	SRP Routine Monitoring At Val Vista Water Treatment Plant SVCA 3-1.4	1998 - 11 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 12 partial suites 2002 - 12 partial suites	No exceedances					
	SRP Routine Monitoring At Granite Reef Dam MGSOC000.05 SVCA 3-0.0	1998 - 11 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 12 partial suites 2002 - 12 partial suites	No exceedances					

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row DWS Inconclusive AgI Inconclusive AgL Inconclusive	1998 - 2002 171 samples 58 sampling events	No exceedances					SRP collected 171 samples at 3 sites in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).
Sycamore Creek Tenk Canyon-Agua Fria River AZ15070102-024B A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Near Dugas Above ranger station MGSYD004.90 100704	1998 - 1 partial suite 2001 - 1 partial suite 2002 - 4 full suites	No exceedances					
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgL Attaining	1998 - 2002 6 sampling events	No exceedances					ADEQ collected 6 samples in 1998-2002. Assessed as "attaining all uses."
Tempe Canal 15050100 - Western Canal AZ15050100-115 DWS, AgI, AgL	SRP Routine Monitoring At South Tempe Water Treatment Plant MGTPC004.16 SVCA 6-9.1	1998 - 10 partial suites 1999 - 8 partial suites 2000 - 11 partial suites 2001 - 11 partial suites 2002 - 10 partial suites	No exceedances					
	Summary Row DWS Inconclusive AgI Inconclusive AgL Inconclusive	1996 - 2002 50 samples	No exceedances					SRP collected 50 samples in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).
Turkey Creek headwaters - tributary at 34°19'28"/112°21'28" AZ15070102-036A A&Wc, FC, FBC, AgI, AgI	ADEQ TMDL Program At Forest Road 261 MGTRK014.8	2000 - 1 metals suite	No exceedances					
	ADEQ TMDL Program At Forest Road 706 MGTRK013.3	2000 - 1 metals suite	No exceedances					
	ADEQ TMDL Program At Goodwin MGTRK010.36	2000 - 1 metals suite 2001 - 3 metals suites	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive	2000 - 2001 6 samples 4 sampling events	No exceedances					ADEQ collected 6 samples at 3 sites in 2000-2001. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: turbidity/SSC, total boron, dissolved oxygen, *Escherichia coli*, and total metals (manganese and mercury).

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Turkey Creek tributary at 34°19'28"/112°21'28" - Poland Creek AZ15070102-036B A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program At corral MGTRK006.54	2000 - 2 partial suites 2001 - 2 partial suites	No exceedances					Lab reporting limits for dissolved cadmium and copper sample were too high to use results for assessment.
	ADEQ TMDL Program At Forest Road 93 MGTRK003.8	2000 - 2 partial suites 2002 - 1 partial suite	Lead (total) µg/L	15 (FBC)	<5 - 76	1 of 1		Lab reporting limit for 1 of 3 dissolved cadmium samples was too high to use results for assessment.
	ADEQ TMDL Program At bridge just above tailings MGTRK002.45	2000 - 4 metals (total) 2001 - 3 metals suites 2002 - 1 partial suites	Lead (total) µg/L	15 (FBC)	<5 - 66	1 of 5		Lab reporting limits for dissolved cadmium for 4 of 5 samples were too high to use results for assessment.
	ADEQ TMDL Program At tributary near mines MGTRK002.25	2002 - 1 partial suites	Lead (total) µg/L	15 (FBC)	54 - 88	1 of 1		
	ADEQ TMDL Program At tailings runoff (in stream)	2001 - 2 partial suites	Arsenic (dissolved) µg/L	360 (A&Ww acute)	62 - 18,200	1 of 2		
				190 (A&Ww chronic)	62 - 18,200	1 of 2		
			Arsenic (total) µg/L	50 (FBC)	43 - 35,900	2 of 2		
				200 (AgL)		2 of 2		
				1450 (FC)		1 of 2		
				2000 (AgI)		1 of 2		
			Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	53 - 626	2 of 2		
				varies by hardness (A&Ww chronic)	53 - 626	2 of 2		
			Cadmium (total) µg/L	50 (AgI)	11 - 883	2 of 2		
				50 (AgL)		2 of 2		
				84 (FC)		2 of 2		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	858 - 13,600	2 of 2		
				varies by hardness (A&Ww chronic)	858 - 13,600	2 of 2		
			Copper (total) µg/L	500 (AgL)	43 - 13,180	2 of 2		
				1300 (FBC)		2 of 2		
				5000 (AgI)		1 of 2		

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
			Lead (dissolved) µg/L	varies by hardness (A&Ww chronic)	<5 - 61	2 of 2		
			Lead (total) µg/L	15 (FBC)	5 - 1070	2 of 2		
				100 (AgL)		1 of 2		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	7620 - 158,000	2 of 2		
				varies by hardness (A&Ww chronic)		2 of 2		
			Zinc (total) µg/L	10,000 (AgI)	1540 - 174,000	2 of 2		
				25,000 (AgL)		1 of 2		
				69,000 (FC)		1 of 2		
	ADEQ TMDL Program Downstream of mines MGTRK002.06	2000 - 1 partial suites 2001 - 2 partial suites 2002 - 1 partial suite	Arsenic (total) µg/L	50 (FBC)	<10 - 106	1 of 3		Some dissolved cadmium and dissolved copper samples could not be assessed due to lack of water hardness results
			Lead (total) µg/L	15 (FBC)	<5 - 150	1 of 4		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<20 - 430	1 of 4		
				varies by hardness (A&Ww chronic)	<20 - 430	1 of 4		
	ADEQ TMDL Program Bottom site MGTRK002.02	2002 - 1 partial suite	Lead (total) µg/L	15 (FBC)	49 - 110	1 of 1		
	ADEQ TMDL Program Old biocriteria site MGTRK000.91	2001- 1 partial suite	No exceedances					
	Summary Row A&Ww Impaired FC Attaining FBC Inconclusive AgI Inconclusive AgL Attaining	2000 - 2002 24 samples 7 sampling events	Arsenic (dissolved) µg/L	360 (A&Ww acute)	<5 - 18,200	1 of 16 samples 1 of 6 events (in 2001)	Inconclusive	ADEQ collected 24 samples at 8 sites in 2000 - 2002. Assessed as "impaired" due to cadmium, copper, and zinc exceedances. Placed on the Planning List due to arsenic and lead exceedances and missing core parameters: *Escherichia coli*, total boron, total manganese, and turbidity/SSC.
				190 (A&Ww chronic)		1 of 16 samples 1 of 6 events (17% exceed)	Inconclusive	
			Arsenic (total) µg/L	50 (FBC)	<5 - 37,900	3 of 16	Attaining	
				200 (AgL)		2 of 16	Attaining	
				1450 (FC)		1 of 16	Attaining	

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
				2000 (Agl)		1 of 16	Attaining	
			Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	<1.0 - 931	2 of 9 samples 2 of 4 events (in 2001)	Impaired	
				varies by hardness (A&Ww chronic)	<1.0 - 931	2 of 9 samples 2 of 4 events (insufficient events)	Inconclusive	
			Cadmium (total) µg/L	84 (FC)	<1.0 - 883	2 of 19	Attaining	
				50 (Agl, AgL)		2 of 19	Attaining	
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 13,600	2 of 13 samples 2 of 7 events (in 2001)	Impaired	
				varies by hardness (A&Ww chronic)		2 of 13 samples 2 of 7 events (insufficient events)	Inconclusive	
			Copper (total) µg/L	500 (AgL)	<10 - 13,180	2 of 19	Attaining	
				1300 (FBC)		2 of 19	Attaining	
				5000 (Agl)		1 of 19	Attaining	
			Lead (dissolved)	varies by hardness (A&Ww chronic)	<5 - 61	2 of 18 samples 2 of 7 events (insufficient events)	Inconclusive	
			Lead (total) µg/L	15 (FBC)	<5 - 1070	7 of 18 samples	Inconclusive →	
				100 (AgL)		1 of 18 samples	Attaining	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<50 - 158,000	3 of 18 samples 3 of 7 events (in 2001)	Impaired	
				varies by hardness (A&Ww chronic)		3 of 18 samples 3 of 7 events (42% exceed)	Impaired	
			Zinc (total)	10,000 (Agl)	<20 - 174,000	2 of 19	Attaining	
				25,000 (AgL)		2 of 19		
				69,000 (FC)		2 of 19		

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Western Canal Tempe Canal - HUC boundary 15050100 AZ15060106B-262 AgI, AgL	SRP Routine Monitoring At Lateral 12.8 Near 19th Ave, Phoenix MGWSC012.39 SVCA 7-12.8	1998 - 11 partial suites 1999 - 11 partial suites 2000 - 11 partial suites 2001 - 11 partial suites 2002 - 12 partial suites	No exceedances					
	Summary Row **AgI Inconclusive** **AgL Inconclusive**	**1998 - 2002** **56 sampling events**	**No exceedances**					**SRP collected 56 samples in 1998-2002. Assessed as "Inconclusive" and placed on the Planning List due to missing core parameters: total metals (manganese, copper, and lead).**
Western Canal HUC boundary 15050100 - terminus AZ15050100-990 DWS, AgI, AgL	SRP Routine Monitoring At Kyrene Intake MGWSC006.00 SVCA 7-22E	1998 - 11 partial suites 1999 - 11 partial suites 2000 - 11 partial suites 2001 - 10 partial suites 2002 - 12 partial suites	Lead (dissolved) µg/L	15 (DWS)	<2 - 16	1 of 55		
			Selenium (dissolved) µg/L	20 (AgL)	<2 - 24	1 of 55		Dissolved selenium data was compared to total selenium standard.
	Summary Row **DWS Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1998 - 2000** **55 sampling events**	**Lead (dissolved) µg/L**	**15 (DWS)**	**<2 - 16**	**1 of 55**	**Attaining**	**SRP collected 55 samples in 1998 - 2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).**
			Selenium (dissolved) µg/L	**20 (AgL)**	**<2 - 24**	**1 of 55**	**Attaining**	
LAKES MONITORING DATA								
Alvord Park Lake AZL15060106B-0050 A&Ww, FC, PBC	AGFD Urban Lakes Study and Routine Monitoring MGALV-A 101040	1998 - 11 field 1999 - 1 partial suite 2000 - 2 partial suites 2002 - 1 partial suite	Ammonia mg/L	varies by temperature and pH (A&Ww chronic)	0.50 -1.09	2 of 4		
	AGFD Urban Lakes Study and Routine Monitoring MGALV-B 101041	1998 - 11 field 1999 - 1 partial suite 2000 - 2 partial suites	Ammonia mg/L	varies by temperature and pH (A&Ww chronic)	0.50 - 1.18	2 of 4		
	AGFD Urban Lakes Study and Routine Monitoring MG-ALV-C 101042	1998 - 11 field 2000 - 2 partial suites	No exceedances					
	AGFD Urban Lakes Study and Routine Monitoring MG-ALV-ABC (composite from sites A, B, C) 101053	1998 - 4 partial suites	No exceedances					
	AGFD Routine Monitoring MG-ALV-I	1999 - 2 partial suites 2000 - 1 partial suite	Ammonia mg/L	varies by temperature and pH (A&Ww chronic)	<0.04 - 0.386	1 of 3		
	AGFD Routine Monitoring MG-ALV-ML	1999 - 1 partial suite 2001 - 1 partial suite	Ammonia mg/l	varies by temperature and pH (A&Ww chronic)	0.33	1 of 1		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Clean Lakes Program MGALV (Sites A, BR, SH)	2002 - 4 *Escherichia coli*	*Escherichia coli* CFU/100 ml	235 (FBC)	41 - >2419	2 of 4		
	Summary Row **A&Ww Impaired** **FC Inconclusive** **PBC Inconclusive**	**1998 - 2002** **51 samples** **16 sampling events**	Ammonia mg/L	varies by temperature and pH (A&Ww chronic)	<0.04 - 1.18	6 of 9 samples 4 of 6 events (>3 exceedances)	Impaired	**AGFD collected 51 samples at 5 sites in 1998-2002. Assessed as "impaired" due to ammonia exceedances.** **ADEQ assessed the FBC designated use as "inconclusive" and placed it on the Planning List for the following reasons:** **- One of the two *E. coli* exceedances was very close to the standard (result is 260, standard is 235), and** **- Bacterial lab methods used are an estimation of bacteria density (most probable number) (see discussion in Chapter III).** **This reach is also on the Planning List due to missing core parameters: total mercury and turbidity.**
			Escherichia coli **CFU/100 ml**	**235 (FBC)**	**41 - >2419**	**2 of 4 events (in 2002)**	**Inconclusive (see comment)**	
Chaparral Lake AZL15060106B-0300 A&Ww, FC, PBC, AgI	AGFD Urban Lakes Study and Routine Monitoring MGCHA-A 101045	1998 - 11 partial suites 2002 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.6 - 14.0 (62 - 184%)	3 of 12		
			pH (high) SU	6.5 - 9.0 (A&Ww, PBC, AgI)	7.9 - 9.4	2 of 12		
	AGFD Urban Lakes Study MGCHA-B 101046	1998 - 11 field	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	5.2 - 13.8 (70 - 185%)	3 of 11		
			pH (high) SU	6.5 - 9.0 (A&Ww, PBC, AgI)	8.0 - 9.4	2 of 11		
	AGFD Urban Lakes Study MGCHA-AB 101056 (composite of sites A and B)	1998 - 4 partial suites	No exceedances					
	AGFD Routine Monitoring MGCHA-ML	2001 - 1 partial suite	No exceedances					
	ADEQ Lakes Program MGCHA (Sites BR, SH, A)	2002 - 5 *Escherichia coli*	*Escherichia coli* CFU/100 ml	235 (FBC)	15 - 2419	5 of 5		
	Summary Row **A&Ww Impaired** **FC Attaining** **PBC Impaired** **AgI Inconclusive**	**1998 - 2002** **28 samples** **13 sampling events**	**Dissolved oxygen mg/L**	**>6.0 (90% saturation) (A&Ww)**	**4.6 - 14.0 (62 - 185%)**	**6 of 24**	**Impaired**	**AGFD collected 28 samples at 3 sites in 1998 - 2002. Assessed as "impaired" due to low dissolved oxygen and *Escherichia coli* exceedances.** **Placed on the Planning List due to missing core parameters: total boron and turbidity.**
			Escherichia coli **CFU/100 ml**	**235 (FBC)**	**15 - 2419**	**5 of 5 events (in 2002)**	**Impaired**	
			pH (high) SU	**6.5 - 9.0 (A&Ww, PBC, AgI)**	**7.9 - 9.4**	**4 of 24**	**Attaining**	

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Cortez Park Lake AZL15060106B-0410 A&Ww, FC, PBC, AgI	AGFD Urban Lakes Study and Routine Monitoring MGCOR-A 101043	1998 - 11 field	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.0 - 12.8 (53 - 185%)	1 of 11		
			pH (high) SU	6.5 - 9.0 (A&Ww, PBC, AgI)	8.2 - 10.0	6 of 11		
	AGFD Urban Lakes Study and Routine Monitoring MGCOR-B 101044	1998 - 11 field	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	3.9 - 11.3 (51 - 153%)	1 of 11		
			pH (high) SU	6.5 - 9.0 (A&Ww, PBC, AgI)	8.2 - 9.6	2 of 11		
	AGFD Urban Lakes Study MGCOR-AB (composite of sites A and B) 101055	1998 - 4 partial suites	No exceedances					
	AGFD Routine Monitoring MGCOR-Bridge	1999 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	3.1 (43%)	1 of 1		
	AGFD Routine Monitoring MGCOR-Main Lagoon	1999 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	2.6 (37%)	1 of 1		
	AGFD Routine Monitoring MGCOR-Small Lagoon	1999 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.0 (57%)	1 of 1		
	Summary Row A&Ww Impaired FC Inconclusive PBC Impaired AgI Impaired	**1998 - 1999** **29 samples** **12 sampling events**	**Dissolved oxygen mg/L**	**> 6.0 (90% saturation) (A&Ww)**	**2.6 - 12.8 (37 - 173%)**	**5 of 25**	**Impaired**	**AGFD collected 12 samples at 5 sites in 1998-1999. Assessed as "impaired" due to low dissolved oxygen and high pH.**
			pH (high) SU	**6.5 - 9.0 (A&Ww, PBC, AgI)**	**7.7 - 10.0**	**8 of 25**	**Impaired**	**Placed on the Planning List due to missing core parameters: *Escherichia coli*, total boron, and total mercury.**
Fain Lake AZL15070101-0005 A&Ww, FC, FBC	ADEQ Lakes Program MGFAI-A 101400	2002 - 1 partial suite	Turbidity NTU	25 (A&Ww)	25 - 33	1 of 1		Missing core parameters: *Escherichia coli*, total boron and total mercury.
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive	**2002** **1 sampling event**	**Turbidity NTU**	**25 (A&Ww)**	**25 - 33**	**1 of 1**	**Inconclusive (see comment)**	**Insufficient monitoring data to assess.** **Placed on the Planning List due to exceedance of the former turbidity standard. Further investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed.**
Lake Pleasant AZL15070102-1100 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Lakes Program MGPLE-A 100067	2000 - 2 partial suites 2001 - 3 full suites 2002 - 3 partial suites	Ammonia mg/L	varies by temperature and pH (A&Ww chronic)	0.03 - 0.42	1 of 5		
			Selenium(total) ug/L	2.0 (A&Ww chronic)	<2 - 3	1 of 7		

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Lakes Program MGPLE-B 100068	2000 - 2 partial suites 2001 - 3 full suites 2002 - 3 partial suites	pH SU	6.5 - 9.0 (A&Ww, FBC, DWS, AgI, AgL)	7.7 - 10.6	1 of 8		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2.0 - 3.0	1 of 6		
	ADEQ Lakes Program MGPLE-MAR 101000	2000 - 1 field + 3 VOCs 2001 - 2 field + 3 VOCs	No exceedances					
	Univ. of Arizona Reservoir Project for ADEQ MGPLE-C	2002 - 2 partial suites	No exceedances					
	AGFD Routine Monitoring MGPLE 5 sites (Agua Fria arm, Castle Creek arm, dam site, mid-lake, boat ramp)	1998 - 1 partial suite 2000 - 2 partial suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.6 - 8.9 (53 - 109%)	1 of 12 (at Agua Fria Arm site)		
	Summary Row A&Ww Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining	1998 - 2002 30 samples 9 sampling events	Ammonia mg/L	varies by pH and temperature (A&Ww chronic)	0.03 - 0.42	1 of 25 samples 1 of 9 events (insufficient events)	Inconclusive	ADEQ, AGFD, and Univ. of Arizona collected 30 samples at 9 sites in 1998 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to ammonia and selenium exceedances and missing core parameter: *Escherichia coli*.
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.6 - 13.6 (53 - 168%)	1 of 38	Attaining	
			pH SU	6.5 - 9.0 (A&Ww, FBC, DWS, AgL, AgI)	7.1 - 10.6	1 of 32	Attaining	
			Selenium µg/L	2.0 (A&Ww chronic)	<2 - 3	2 of 17 samples 1 of 7 events (insufficient events)	Inconclusive	
Lynx Lake AZL15070102-0860 A&Wc, FC, FBC, DWS, AgI, AgL	AGFD Routine Monitoring MGLYN-Dam Dam Site	1998 - 1 partial suite 2000 - 1 partial suite	Manganese (total) µg/L	980 (DWS)	627 - 1520	1 of 1		
	AGFD Routine Monitoring MGLYN-EBR East of boat ramp	2000 - 1 partial suite	Lead (total) µg/L	15 (DWS, FBC)	87	1 of 1		
			Manganese (total) µg/L	980 (DWS)	3440	1 of 1		
	AGFD Routine Monitoring MGLYN-LBR Left of boat ramp	2000 - 1 partial suite	No exceedances					
	AGFD Routine Monitoring MGLYN-ML Mid-lake	1998 - 2 partial suites	No exceedances					
	AGFD Routine Monitoring MGLYN-WBR West of boat ramp	2001 - 1 partial suite	Lead (total) µg/L	15 (DWS, FBC)	19	1 of 1		
	ADEQ Lakes Program MGLYN-A 100037	2002 - 1 partial suite	Manganese (total) µg/L	980 (DWS)	850 - 2650	1 of 1		
	ADEQ Lakes Program MGLYN-B 100038	2002 - 1 partial suite	No exceedances					

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Lakes Program MGLYN-BR 101399	2002 - 1 bacteria	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Attaining	1998 - 2002 10 samples 7 sampling events	Lead (total) µg/L	15 (DWS, FBC)	6 - 87	2 of 5	Inconclusive	ADEQ and AGFD collected 10 samples at 8 sites in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to lead and manganese exceedances and missing core parameters: turbidity, *Escherichia coli*, dissolved metals (copper and cadmium), total boron, and total mercury.
			Manganese (total) µg/L	980 (DWS)	625 - 3440	3 of 7	Inconclusive	
Papago Park Ponds AZL15060106B-1030 A&Ww, FC, PBC	AGFD Urban Lakes Study MGPAP-A 101047	1998 - 10 pH + DO	No exceedances					
	AGFD Urban Lakes Study MGPAP-B 101048	1998 - 10 pH + DO	No exceedances					
	AGFD Urban Lakes Study MGPAP-AB (composite of sites A and B) 101057	1998 - 3 partial suites	No exceedances					
	Summary Row A&Ww Inconclusive FC Attaining PBC Inconclusive	1998 23 samples 10 sampling events	No exceedances					AGFD collected 23 samples at 2 sites for ADEQ in 1998. Assessed as "attaining some uses." Placed on the Planning List due to missing core parameters: *Escherichia coli* and turbidity.
Tempe Town Lake AZL15060106B-1588 A&Ww, FC, FBC	City of Tempe 4 sites (below dam, mid lake, above dam, south shore) MGTTL	1999 - 7 total metals 2000 - 12 total metals 2001 - 12 total metals 2002 - 11 total metals, 100 field*	Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	4 of 42		*Total metals samples were taken at the downstream dam site only. Field parameters were collected at all 4 sites. Additional field samples were taken prior to 2002. See comment in summary row.
	ADEQ Lakes Program MGTTL-A 101316	2002 - 4 partial suites	No exceedances					
	ADEQ Lakes Program MGTTL-B 101315	2002 - 3 partial suites	No exceedances					

TABLE 14. MIDDLE GILA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Attaining FC Attaining FBC Attaining	1999 - 2002 149 samples 56 sampling events	Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	4 of 42	Attaining	149 samples were collected from 6 sites by ADEQ and the City of Tempe. High pH levels occurred until the city began algaecide treatment in 2002. Since April 2002, pH levels have met standards; therefore, pH and dissolved oxygen samples prior to treatment date were not included in this assessment. Assessed as "attaining all uses." Note that ADEQ and the City of Tempe conducted "clean" mercury sampling in 2003 and found no exceedances of dissolved or total mercury water quality standards.

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
MIDDLE GILA WATERSHED -- STREAM ASSESSMENT				
Agua Fria River Sycamore Creek - Big Bug Creek 9 miles AZ15070102-023	A&Ww Attaining FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 1 – Attaining All Uses			
Agua Fria River Little Squaw Creek - Cottonwood Creek 6 miles AZ15070102-017	A&Ww Attaining FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 1 – Attaining All Uses			
Antelope Creek headwaters - Martinez Creek 16 miles AZ15070103-010	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Arizona Canal Granite Reef Dam - Cholla WTP 33 miles AZ15060106B-099A	DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: total fluoride, total metals (arsenic, chromium, copper, lead, manganese, and mercury).		
Arizona Canal Cholla WTP - HUC boundary 15070102 2 miles AZ15060106B-099B	AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: pH and total metals (copper, lead, and manganese).		
Arnett Creek headwaters - Queen Creek 11 miles AZ15050100-1818	A&Ww Attaining FC Attaining FBC Attaining Category 1 – Attaining All Uses			
Blue John Creek headwaters - unnamed tributary to Lynx Creek 1 mile AZ15070102-471	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (1 sample). 2. Acute and chronic cadmium exceedance (1 of 1 sampling event). 3. Acute and chronic copper exceedance (1 of 1 sampling event). 4. Acute and chronic zinc exceedance (1 of 1 sampling event).		

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Buckeye Canal Gila River - South Extension Canal 4 miles AZ15070101-209	AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive	On the Planning List due to: 1. Missing core parameters: total boron and total metals (copper, lead, and manganese). 2. Added in 2002 due to DDE exceedance (1 of 1 sample). Laboratory reporting limits for current DDE samples and older samples were too high to use results for assessment.		
Cash Mine Creek headwaters - Hassayampa River 1 mile AZ15070103-349	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (1 sample). 2. Acute, chronic, and total copper exceedance (1 of 1 sampling event). 3. Acute and chronic zinc exceedance (1 of 1 sampling event).		
Cash Mine Creek, unnamed tributary of headwaters - Cash Mine Creek 1 mile AZ15070103-415	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (1 sample). 2. Acute and chronic cadmium exceedance (1 of 1 sampling event). 3. Acute and chronic copper exceedance (1 of 1 sampling event). 4. Lead exceedance (1 of 1 sample). 5. Acute and chronic zinc exceedance (1 of 1 sampling event).		
Cave Creek headwaters - Cave Creek Dam 33 miles AZ15060106B-026A	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 – Attaining All Uses			
Consolidated Canal 15060106B - above WTP intake 9 miles AZ15050100-074A	DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).		
Dripping Spring Wash headwaters - Gila River 20 miles AZ15050100-011	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to insufficient monitoring data.		
Eastern Canal WTP below Warner Road - terminus 9 miles AZ15050100-207B	AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).		
French Gulch headwaters - Hassayampa River 10 miles AZ15070103-239	A&Ww Impaired FC Attaining FBC Inconclusive Category 5 – Impaired (New designated uses since last assessment based on revisions of the tributary rule in 2002. AgI and AgL designated uses no longer apply.)	On the Planning List due to missing core parameters: dissolved oxygen, *Escherichia coli*, and turbidity/SSC. Remove beryllium from the Planning List. Standard modified in 2002. No exceedance of the new beryllium standard.	On the 303(d) List (since 1994) for copper and zinc. Acute copper exceedances in 27 of 50 sampling events, chronic copper exceedances in 38 of 50 sampling events. Acute and chronic zinc exceedances in 29 of 50 sampling events. TMDL investigation and sampling are ongoing. Delist manganese. Manganese standards were revised in 2002. No exceedances of the new manganese standard.	

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Galena Gulch headwaters - Agua Fria River 6 miles AZ15070102-745	A&We Inconclusive PBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to cyanide exceedances in older data.	Remove from 2002 list	
Gila River Dripping Spring Wash - San Pedro River 11 miles AZ15050100-009	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to missing core parameters.		
Gila River San Pedro River - Mineral Creek 20 miles AZ15050100-008	A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to former turbidity standard exceedances (2 of 6 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. Remove mercury from the Planning List. Listed in 2002 due to inadequate detection limits to assess mercury standards. New detection limits were lower and indicated no mercury exceedances.	attainment 0.200?	
Gila River Mineral Creek - Donnelly Wash 16 miles AZ15050100-007	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclsuive Category 3 – Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to lack of copper and turbidity data following a spill clean-up.		
Gila River Ashurst-Hayden Dam - Florence WWTP 13 miles AZ15050100-003B	A&We Inconclusive PBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to copper exceedance (1 of 2 samples) and missing core parameters.		
Gila River Salt River - Agua Fria River 4 miles AZ15070101-015	A&Wedw Attaining FC Impaired PBC Attaining AgI Attaining AgL Attaining Category 5 – Impaired		EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, the reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Gila River Agua Fria River - Waterman Wash 12 miles AZ15070101-014	A&Wedw Inconclusive FC Impaired PBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 – Impaired	On the Planning List due to insufficient monitoring data to assess (only 1 sample). Added in 2002 due to missing core parameters.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.
Gila River Waterman Wash - Hassayampa River 14 miles AZ15070101-010	A&Wedw Inconclusive FC Impaired PBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 – Impaired	On the Planning List due to no current monitoring data.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.
Gila River Hassayampa River - Centennial Wash 7 miles AZ15070101-009	A&Wedw Inconclusive FC Impaired PBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 – Impaired	On the Planning List due to no current monitoring data.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST TURB/SSC	OTHER INFORMATION
Gila River Centennial Wash - Gillespie Dam 5 miles AZ15070101-008	A&Wedw Impaired FC Impaired FBC Attaining AgI Impaired AgL Attaining Category 5 – Impaired	On the Planning List due to former turbidity standard exceedances (5 of 23 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. Remove beryllium from the Planning List. Standard modified in 2002. No exceedances of the new standard.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants. On the 303(d) List (since 1992) due to boron exceedances (22 of 23 samples). Add to the 303(d) List due to chronic selenium exceedances (18 of 23 sampling events, 78% exceed).	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream. Although the turbidity standard was repealed in 2002, exceedances indicate impairment based on the former standard (5 of 23 samples exceed). Reach will remain "not attaining" for turbidity until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Gila River Gillespie Dam - Rainbow Wash 5 miles AZ15070101-007	A&Ww Inconclusive FC Impaired FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 – Impaired	On the Planning List due to no current monitoring data.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.
Gila River Rainbow Wash - Sand Tank 17 miles AZ15070101-005	A&Ww Inconclusive FC Impaired FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 – Impaired	On the Planning List due to no current monitoring data.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Gila River Sand Tank - Painted Rocks Reservoir 19 miles AZ15070101-001	A&Ww Inconclusive FC Impaired FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 – Impaired	On the Planning List due to no current monitoring data.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.
Grand Canal HUC boundary 15070101 - New River 5 miles AZ15070102-250	AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: field pH and total metals (copper, lead, and manganese).		
Hassayampa River headwaters - Copper Creek 11 miles AZ15070103-007A	A&Wc Not attaining FC Not attaining FBC Not attaining AgI Not attaining AgL Not attaining Category 4A – Not attaining	On the Planning List due to: 1. TMDL follow-up monitoring for cadmium, copper, pH, and zinc. Cadmium exceedances in 8 of 10 samples (acute standard), in 10 of 10 samples (chronic standard), and in 1 of 5 samples (total standard). Copper exceedances in 9 of 10 samples (acute and chronic standards) and 9 of 48 samples (total standards). Low pH in16 of 52 samples. Zinc exceedances in 10 of 10 samples (acute and chronic standards). 2. Missing core parameters: total boron, *Escherichia coli*, and total metals (mercury, manganese, copper, and lead).	Delist zinc. A zinc TMDL was approved by EPA in 2002 (see comment *). Placed on the Planning List for TMDL follow-up monitoring.	*TMDLs for cadmium, copper, pH, and zinc were approved by EPA in 2002. Note cadmium and copper were delisted in 2002 due to insufficient exceedances to meet the Impaired Waters Identification Rule; however, the draft TMDL had already been completed and submitted to EPA for approval. Placed on the Planning List for TMDL follow-up monitoring for all parameters.
Hassayampa River Copper Creek - Blind Indian Creek 20 miles AZ15070103-007B	A&Ww Attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to *Escherichia coli* exceedance (1 of 12 sampling events, occurred in 2001). Remove beryllium from the Planning List. Standard modified in 2002. No exceedances of the new standard.		
Hassayampa River Cottonwood Creek - Martinez Wash 32 miles AZ15070103-004	A&Ww Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 1 – Attaining All Uses	Remove arsenic, beryllium, copper, *Escherichia coli*, lead, and turbidity from the Planning List. Current data indicate that all uses are "attaining" for these parameters.		
Hassayampa River Sols Wash - 8 miles below Wickenburg 9 miles AZ15070103-002A	A&Ww Attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to *Escherichia coli* exceedance (1 of 3 sampling events, occurred in 2002).		

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Hassayampa River Buckeye Canal - Gila River 2 miles AZ15070103-001B	A&Ww Inconclusive FC Impaired FBC Attaining AgL Inconclusive Category 5 – Impaired	On the Planning List due to former turbidity standard exceedance (1 of 4 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently collecting fish tissue data in support of completing a TMDL. DDE (DDT metabolite) exceeded standards in 2 of 4 water samples.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.
Hassayampa River, unnamed tributary to -007A headwaters - Hassayampa River 1 mile AZ15070103-417	A&Wc Not attaining FC Inconclusive FBC Inconclusive Category 4A – Not attaining	On the Planning List due to: 1. Insufficient monitoring data to assess (1 sample). 2. TMDL follow-up monitoring for cadmium, copper, pH, and zinc (see Hassayampa TMDL). Acute and chronic copper exceedance (1 of 1 sampling event). 3. Missing core parameters: dissolved oxygen, *Escherichia coli*, total mercury, pH, and turbidity/SSC.		Cadmium, copper, pH, and zinc loadings from this reach were addressed in the Hassayampa River TMDL. Therefore, assessed as "not attaining" and added to the Planning List for TMDL follow-up monitoring.
Indian Bend Wash headwaters - Salt River 5 miles AZ15060106B-179	A&We Inconclusive PBC Inconclusive Category 3 – Inconclusive	On the Planning List due to: 1. Lead exceedance (1 of 3 samples). 2. Missing core parameters: dissolved metals (cadmium, copper, and zinc).		
Little Ash Creek headwaters - Ash Creek 1.8 miles AZ15070102-039	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (2 samples).		
Lynx Creek headwaters - 34°34'29"/112°21'05 13 miles AZ15070102-033A (Reach was split into coldwater and warmwater segments since last assessment. No current data in 033B. Previous data in 033A.)	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to cadmium and copper exceedance (1 of 1 sample).		
Lynx Creek, unnamed tributary of headwaters - Lynx Creek 1 mile AZ15070102-124	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	Add to the Planning List due to: 1. Insufficient monitoring data to assess (1 sampling event). 2. Acute and chronic cadmium exceedance (1 of 1 sampling event). 3. Acute and chronic copper exceedance (1 of 1 sampling event). 4. Acute and chronic zinc exceedance (1 of 1 sampling event).		

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Martinez Canyon headwaters - Box Canyon 10 miles AZ15050100-080	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	Add to the Planning List due to insufficient monitoring data to assess (1 sampling event).		
Mineral Creek headwaters - Devils Canyon 9 miles AZ15050100-012A	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to insufficient monitoring data.		
Mineral Creek Devils Canyon - Gila River 10 miles AZ15050100-012B	A&Ww Impaired FC Inconclusive FBC Inconclusive AgL Attaining Category 5 – Impaired	On the Planning List due to: 1. Former turbidity standard exceedances (7 of 41 samples above treatment). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 2. Missing core parameters: *Escherichia coli* and total mercury.	Add selenium to the 303(d) List due to chronic selenium exceedances (19 of 23 sampling events, 83% exceed). On the 303(d) list (since 1992) for copper exceedances (acute standard exceeded in 1 of 41 sampling events, occurred in 2001). Although current copper exceedances have greatly diminished due to new treatment and copper data are assessed as "inconclusive," the reach cannot be delisted until a TMDL is complete or copper data indicate designated uses are being attained. Delist beryllium. Standards revised in 2002. No exceedances of the new standard. Delist pH and zinc. No exceedances since January, 2001, following completion of water diversion.	EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
New River headwaters - Interstate 17 25 miles AZ15070102-006A	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List insufficient monitoring data to assess (1 sampling event).		
Queen Creek headwaters - Superior Mine WWTP 9 miles AZ15050100-014A	A&We Impaired PBC Attaining AgL Inconclusive Category 5 – Impaired	On the Planning List due to missing core parameters: dissolved cadmium and total lead.	On the 303(d) List (since 2002) for copper. Although current copper data are inconclusive (1 of 8 sampling events exceeded), the reach cannot be delisted until a TMDL is complete or copper data indicate designated uses are being attained.	
Queen Creek Superior Mine WWTP - Potts Canyon 6 miles AZ15050100-014B	A&Wedw Impaired PBC Inconclusive Category 5 – Impaired	On the Planning List due to: 1. Chronic selenium exceedance (1 of 1 sampling event). 2. Missing core parameters: dissolved cadmium, *Escherichia coli*, and total lead.	Add copper to the 303(d) List due to acute copper exceedances (2 of 9 sampling events, occurred in 2000 and 2002).	
Salt River 2 km below Granite Reef Dam - Interstate 10 bridge 19 miles AZ15060106B-001B	A&We Inconclusive PBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (1 sampling event).		

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Salt River 23rd Ave WWTP - Gila River 14 miles AZ15060106B-001D	A&Wedw Attaining FC Impaired PBC Attaining AgI Attaining AgL Attaining Category 5 – Impaired		EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this reach cannot be delisted until a TMDL is complete or sufficient data ere collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.
South Canal Granite Reef Dam - Consolidated Canal 10 miles AZ15060106B-180	DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).		
Sycamore Creek Tank Canyon - Agua Fria River 18 miles AZ15070102-024B (Reach was split into coldwater and warmwater segments since the last assessment. No current data in 024A.)	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 – Attaining All Uses			
Tempe Canal HUC boundary 15050100 - Western Canal 1 mile AZ15050100-115	DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).		
Turkey Creek headwaters - unnamed tributary at 34°19'28"/112°21'28" 9 miles AZ15070102-036A (Reach was split into coldwater and warmwater segments since last assessment.)	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: dissolved oxygen, *Escherichia coli*, total boron, total metals (manganese and mercury), and turbidity/SSC.	Delist cadmium, copper, and zinc. All past and current exceedances on Turkey Creek occurred in the lower segment (036B). (Reach was split into coldwater and warmwater segments in 2002, no basis for this segment to be listed). status OK?	
Turkey Creek unnamed tributary at 34°19'28"/112°21'28" - Poland Creek 21 miles AZ15070102-036B (Reach was split into coldwater and warmwater segments since last assessment.)	A&Ww Impaired FC Attaining FBC Inconclusive AgI Inconclusive AgL Attaining Category 5 – Impaired	On the Planning List due to: 1. Acute and chronic arsenic exceedance (1 of 6 sampling events, occurred in 2001) and total arsenic exceedances (3 of 16 samples). 2. Chronic lead exceedances (2 of 7 sampling events). 2. Missing core parameters: *Escherichia coli*, total boron, total manganese, and turbidity/SSC.	On the 303(d) List for cadmium, copper, and zinc since 1992. Acute and chronic cadmium exceedances in 2 of 4 sampling events (occurred in 2001). Acute and chronic copper exceedances in 2 of 7 sampling events (occurred in 2001). Acute and chronic zinc exceedances in 3 of 7 sampling events (occurred in 2001). TMDL investigation is in progress.	

add As, Pb

Total Pb = 7/18

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Western Canal Tempe Canal - HUC boundary 15050100 15 miles AZ15060106B-262	AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: total metals (manganese, copper, and lead).		
Western Canal 10 miles HUC boundary 15050100 - terminus AZ15050100-990	DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: total metals (arsenic, chromium, lead, manganese, and copper).		
MIDDLE GILA WATERSHED -- LAKE ASSESSMENTS				
Alvord Park Lake 27 acres AZL15060106B-0050	A&Ww Impaired FC Inconclusive PBC Inconclusive Category 5 – Impaired Trophic status – Hypereutrophic	On the Planning List due to: 1. *Escherichia coli* exceedances (2 of 4 sampling events, occurred in 2002). 2. Missing core parameters: total mercury and turbidity. Remove beryllium from the Planning List. No exceedances under the new standard.	Add ammonia to the 303(d) List for chronic ammonia exceedances (4 of 6 sampling events).	ADEQ assessed the FBC designated use as "inconclusive" for the following reasons: - One of the two *E. coli* exceedances was very close to the standard (result is 260, standard is 235). - Bacterial lab methods provide an estimate of bacteria density (most probable number) (see discussion in Chapter III).
Chaparral Lake 13 acres AZL15060106B-0300	A&Ww Impaired FC Attaining PBC Impaired AgI Inconclusive Category 5 – Impaired Trophic status – Hypereutrophic	On the Planning List due to missing core parameters: total boron, *Escherichia coli*, and turbidity. Remove pH from the Planning List. Current data (4 of 24 samples exceed) indicate support of designated uses.	Add dissolved oxygen to the 303(d) List for low dissolved oxygen (6 of 24 samples). Add *Escherichia coli* to the 303(d) List. Five of five sampling events exceeded standards (in 2002).	
Cortez Park Lake 2 acres AZL15060106B-0410	A&Ww Impaired FC Inconclusive PBC Impaired AgI Impaired Category 5 – Impaired Trophic status – Eutrophic	On the Planning List due to: 1. Missing core parameters: *Escherichia coli*, total boron, and total mercury. 2. Fish kill in 1999 related to an algal bloom is evidence of a narrative standards violation.	Add dissolved oxygen and pH to the 303(d) List for low dissolved oxygen (5 of 25 samples) and low pH (8 of 25 samples).	
Fain Lake 10 acres AZL15070101-0005	A&Ww Inconclusive FC Inconclusive PBC Inconclusive Category 3 -- Inconclusive (not assessed) Trophic status – Hypereutrophic	On the Planning List due to: 1. Insufficient monitoring data to assess (1 sampling event). 2. Former turbidity standard exceedance (1 of 1 sample). Investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed.		
Lake Pleasant 2042 acres AZL15070102-1100	A&Ww Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 2 – Attaining Some Uses Trophic status – Oligotrophic - Mesotrophic	On the Planning List due to: 1. Chronic ammonia exceedance (1 of 9 sampling events). 2. Chronic selenium exceedance (1 of 7 sampling events). 3. Missing core parameter: *Escherichia coli*. Remove fish kill from the Planning List. No fish kills reported 1998-2002.		

TABLE 14. MIDDLE GILA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Lynx Lake 50 acres AZL15070102-0860	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Attaining Category 2 -- Attaining Some Uses Trophic status – Mesotrophic	On the Planning List due to: 1. Lead exceedances (2 of 5 samples). 2. Manganese exceedances (3 of 7 samples). 3. Missing core parameters: *Escherichia coli*, dissolved metals (cadmium and copper), total boron, total mercury, and turbidity.	add Pb, Mn	
Painted Rock Reservoir 100 acres AZL15070101-1020A	A&Ww Inconclusive FBC Inconclusive FC Impaired AgI Inconclusive AgL Inconclusive Category 5 — Impaired Trophic status not calculated	On the Planning List due to insufficient water quality monitoring data.	EPA placed this reach on the 2002 303(d) List because DDT metabolites, toxaphene, and chlordane in fish tissue led to a fish consumption advisory. EPA's listing was based on a violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, this lake cannot be delisted until a TMDL is complete or sufficient data are collected to indicate that these pesticides are no longer a concern in fish tissue (fish consumption advisory removed). ADEQ is currently developing a workplan to complete a TMDL or other remedial strategy to deal with these legacy pollutants.	These pesticides do not stay in an aqueous state and bioaccumulate rapidly up the food chain. Additionally, most lab reporting limits are not low enough to use results for assessment; therefore, lack of exceedances in the water column does not provide sufficient information about pesticide problems in the stream.
Papago Park Ponds 6 acres AZL15060106B-1030	A&Ww Inconclusive FC Attaining PBC Inconclusive Category 2 -- Attaining Some Uses Trophic status – Eutrophic	On the Planning list due to missing core parameters: *Escherichia coli* and turbidity.		
Tempe Town Lake 220 acres AZL15060106B-1588	A&Ww Attaining FC Attaining FBC Attaining Category 1 – Attaining All Uses Trophic status not calculated (Designated uses have changed on this lake since the last assessment.)	Remove pH from the Planning List. Weekly pH samples have met applicable standards since treatment began in April of 2002. OK		

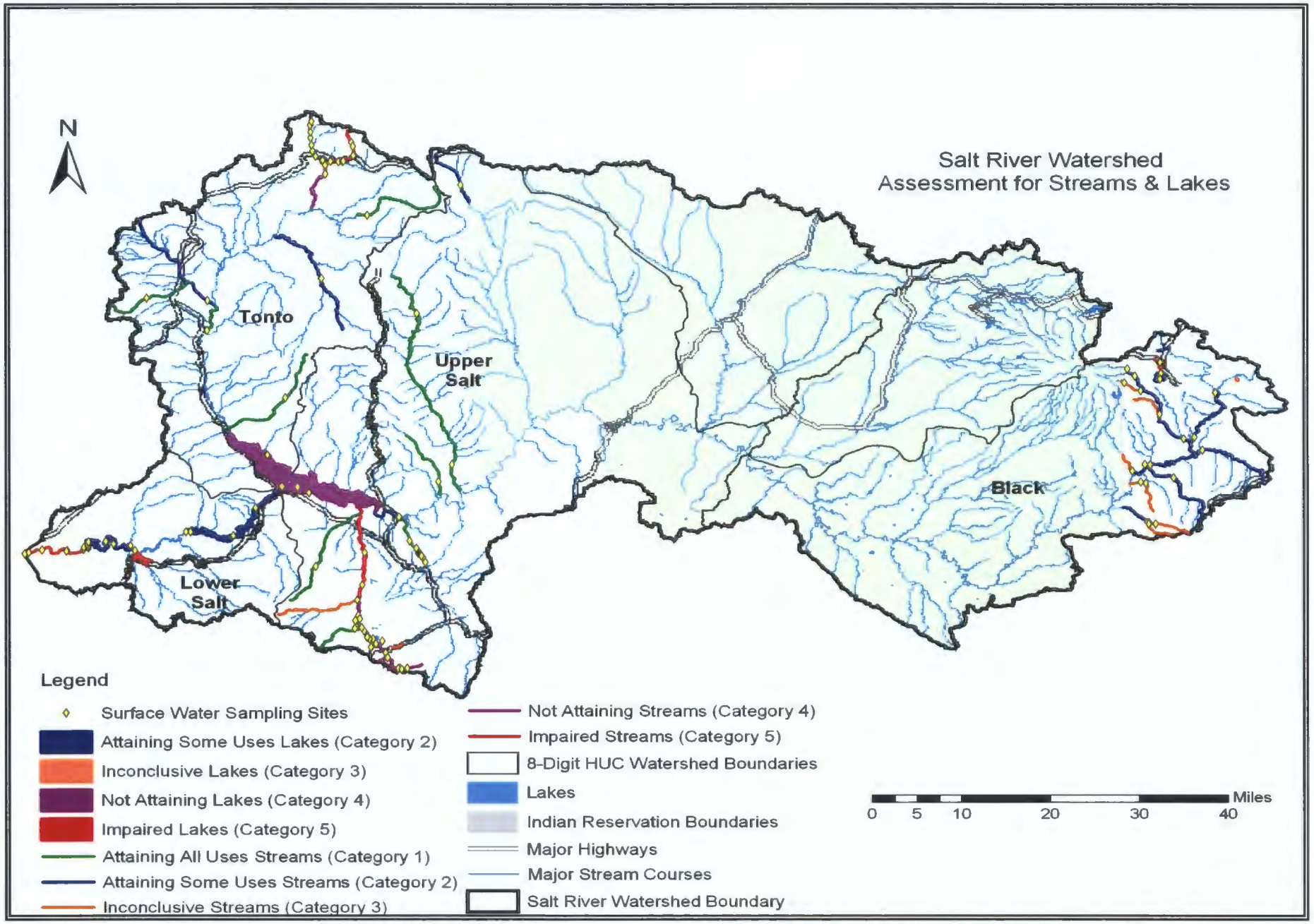

Figure 20. Salt Watershed 2004 Monitoring and Assessment Map

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Bear Wallow Creek North end South Forks - Black River AZ15060101-023 A&Wc, FC, FBC, AgL Unique Water	ADEQ Ambient Monitoring Below South Fork Bear Wallow Creek SRBWL003.48 101198	2001 - 1 full suite 2002 - 1 partial + 1 full suite	No exceedances					Lab reporting limit for dissolved copper too high to use results for assessment.
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Inconclusive** **AgL Attaining**	**2001 - 2002** **3 sampling events**	**No exceedances**					**ADEQ collected 3 samples in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: *Escherichia coli* and dissolved copper.**
Bear Wallow Creek, North Fork headwaters - Bear Wallow Creek AZ15060101-022 A&Wc, FC, FBC, AgL Unique Water	ADEQ Biocriteria Program Above South Fork Bear Wallow Creek SRNBE000.54 100605	1998 - 1 partial suite	No exceedances					Lab reporting limits for dissolved copper samples were too high to use results for assessment.
	ADEQ Ambient Monitoring Above South Fork Bear Wallow Creek SRNBE000.06 101262	2001 - 1 full suite 2002 - 1 full suite	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998** **3 sampling events**	**No exceedances**					**ADEQ collected 3 samples at 2 sites in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (copper and zinc), and total metals (mercury, copper, and lead).**
Bear Wallow Creek, South Fork headwaters - Bear Wallow Creek AZ15060101-258 A&Wc, FC, FBC, AgL Unique Water	ADEQ Ambient Monitoring Upstream of horse pack trail SRNBE000.10 101261	2001 - 1 full suite 2002 - 1 full suite	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** FBC Inconclusive AgL Inconclusive	**1998** **2 sampling events**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Beaver Creek headwaters - Black River AZ15060101-008 A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Near Sprucedale SRBEV000.77 100373	2001 - 1 full + 1 partial suite 2002 - 2 full + 4 partial suites	Turbidity NTU	10 (A&Wc)	6.4 - 17.2	2 of 8		Lab reporting limits for dissolved copper samples too high to use results for assessment.
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**2001 - 2002** **8 sampling events**	**Turbidity** **NTU**	**10** **(A&Wc)**	**6.4 - 17.2**	**2 of 8**	**Inconclusive (see comment)**	**ADEQ collected 3 samples in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to exceedances of the former turbidity standard and missing core parameter: dissolved copper.** **Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**
Black River Beaver Creek - Reservation Creek AZ15060101-007 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring Upstream of Forest Service Road #25 SRBLR029.71 101202	2001 - 1 full suite 2002 - 1 full + 1 partial suite	No exceedances					Lab reporting limits for dissolved copper samples too high to use results for assessment.
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Inconclusive** **DWS Attaining** **AgI Attaining** **AgL Attaining**	**2001 - 2002** **3 sampling events**	**No exceedances**					**ADEQ collected 3 samples in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: *Escherichia coli* and dissolved copper.**
Black River, East Fork headwaters-Black River AZ15060101-009 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring Below Three Forks Creek SREFB006.98 101203	2001 - 1 full suite 2002 - 3 full suites	No exceedances					Lab reporting limits for dissolved copper too high to use results for assessment.
	ADEQ Ambient Monitoring At Buffalo Crossing SREFB000.81 100375	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **DWS Attaining** **AgI Attaining** **AgL Attaining**	**2001 - 2002** **8 samples** **4 sampling events**	**No exceedances**					**ADEQ collected 8 samples at 2 sites in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameter: dissolved copper.**

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Black River, West Fork headwaters - Black River AZ15060101-048 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Biocriteria Program Above Thompson Creek confluence SRWFB011.08 100692	1998 - 1 partial suite	No exceedances					Lab reporting limits for dissolved metals samples were too high to assess the chronic standards.
	ADEQ Ambient Monitoring Below Forest Road #116 SRWFB009.96 101204	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	ADEQ Ambient Monitoring At Buffalo Crossing SRWFB000.78 100376	2001 - 1 full +1 partial suite 2002 - 3 full + 7 partial suites	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining	**1998 - 2002** **17 samples** **13 sampling events**	**No exceedances**					**ADEQ collected 8 samples at 2 sites in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc).**
Campaign Creek headwaters - Pinto Creek AZ15060103-037 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring At Superstition Wilderness SRCGN007.70 100431	2001 - 1 full suite 2002 - 2 full + 1 partial suite	No exceedances					
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgL Attaining	**2001 - 2002** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2001-2002. Assessed as "attaining all uses."**
Canyon Creek headwaters - White Mountain Apache Reservation AZ15060103-014 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring Near Young, Arizona SRCYN031.80 100370	2001 - 1 full suite 2002 - 2 full + 1 partial suite	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining	**2001 - 2002** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to a fish kill related to the Rodeo-Chediski Fire in 2002. Further monitoring is needed to determine long-term negative impacts from the fire.**

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Cherry Creek tributary at 35°05'09"/110°56'04" - Salt River AZ15060103-015B A&Ww, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring 50 meters upstream road SRCHE023.90 101323	2001 - 1 full suite 2002 - 2 full + 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Upstream Road #203 SRCHE003.51 100347	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**2001 - 2002** **8 samples** **7 sampling events**	**No exceedances**					**ADEQ collected 8 samples at 2 sites in 2001-2002. Assessed as "attaining all uses."**
Christopher Creek headwaters - Tonto Creek AZ15060105-353 A&Wc, FC, FBC, AgI, AgL	ADEQ TMDL Program Upstream of recreation area SRCRS006.04 101027	2000 - 3 partial suites 2002 - 6 field + nutrients	No exceedances					
	ADEQ TMDL Program Downstream of recreation SRCRS005.70 101028	2000 - 3 partial suites 2002 - 6 field + nutrients	No exceedances					
	ADEQ TMDL Program Above Christopher & Hwy 260 SRCRS004.47 101029	2000 - 3 partial suites 2002 - 6 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.7 - 9.7 (88 - 116%)	1 of 9		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	ADEQ TMDL Program By cross-section cut SRCRS003.56 101030	2000 - 3 partial suites 2002 - 4 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.5 - 10.4 (79 - 107%)	2 of 7		
			Escherichia coli CFU/100 ml	235 (FBC)	7 - 260	1 of 3		
	ADEQ TMDL Program Above Christopher Cr. Camp and below Hunter Creek SRCRS002.85 101031	2000 - 3 partial suites 2002 - 2 field + nutrients	Turbidity NTU	10 (A&Wc)	2 - 13	1 of 5		
	ADEQ TMDL Program Below Christopher Cr. Camp, above Boy Scout Ranch SRCRS002.26 101032	2000 - 3 partial suites 2002 - 2 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.8 - 9.4 (84 - 108%)	1 of 5		
			Turbidity NTU	10 (A&Wc)	4 - 14	1 of 4		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ TMDL Program Near top of Box Canyon, below Boy Scout Camp SRCRS001.49	2000 - 1 *Escherichia coli*	*Escherichia coli* CFU/100 ml	235 (FBC)	238	1 of 1		
	ADEQ TMDL Program Near top of Box Canyon, below Boy Scout Camp SRCRS001.36	2000 - 1 *Escherichia coli*	No exceedances					
	ADEQ TMDL Program At top of Box Canyon, Below Boy Scout Ranch SRCRS001.24 101033	2000 - 3 partial suites 2002 - 3 field + nutrients	*Escherichia coli* CFU/100 ml	235 (FBC)	1 - 689	2 of 3		One occurred during a storm flow.
			Turbidity NTU	10 (A&Wc)	9 - 89	1 of 5		
	ADEQ TMDL Program Box Canyon pools SRCRS001.23 - 1.18	2000 - 1 *Escherichia coli*	*Escherichia coli* CFU/100 ml	235 (FBC)	133 - 501	1 of 1		
	ADEQ Ambient Monitoring Downstream of Box Canyon SRCRS000.18 100367	1999 - 1 nutrient suite 2001 - 1 partial suite 2002 - 3 full suites	Turbidity NTU	10 (A&Wc)	2 - 30	2 of 4		
	ADEQ TMDL Program Upstream of Tonto Creek, downstream of Box Canyon SRCRS000.08 101034	2000 - 3 partial suites 2002 - 3 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.3 - 10.8 (82 - 105%)	2 of 6		
			Turbidity NTU	10 (A&Wc)	11 - 26	4 of 5		
	Summary Row A&Wc Not attaining FC Attaining FBC Impaired AgI Attaining AgL Attaining	**1999 - 2002** **64 samples** **7 sample events**	**Dissolved oxygen mg/L**	**> 7.0 (90% saturation) (A&Wc)**	**5.8 - 11.2 (79-116%)**	**5 of 54**	**Attaining**	**ADEQ collected 64 samples at 12 sites in 1999-2002. Assessed as "impaired" due to *Escherichia coli* exceedances.** **Turbidity exceedances indicate impairment based on the former turbidity standard. This reach was on the 2002 303(d) List due to turbidity exceedances. Assessed as "not attaining" and placed on the Planning List until sufficient turbidity or suspended sediment concentration (SSC) data are collected to make an assessment of "attaining" or "impaired".**
			***Escherichia coli* CFU/100 ml**	**235 (FBC)**	**1 - 689**	**2 of 7 events (in 2000)**	**Impaired**	
			Turbidity NTU	**10 (A&Wc)**	**21 - 89**	**3 of 54**	**Not attaining (see comment)**	

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Coon Creek Unnamed tributary at 33°46'42"/110°54'25" - Salt River AZ15060103-039B A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring At Forest Service Road 203 Near Roosevelt Lake SRCOO001.73 100379	2001 - 1 full suite 2002 - 3 full suites	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgL Attaining**	**2001 - 2002** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2001-2002. Assessed as "attaining all uses."**
Cottonwood Canyon headwaters - Pinto Creek AZ15060103-891 A&We, PBC (tributary rule)	BHP Mining - NPDES MG2-8b Below Cottonwood Tailings	2002 - 2 field + metals	No exceedances					
	Summary Row **A&We Inconclusive** **PBC Inconclusive**	**2002** **2 sampling events**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Deer Creek headwaters - Rye Creek AZ15060105-018 A&Wc, FC, FBC (tributary rule)	ADEQ Biocriteria Program At Mazatzal Wilderness SRD4E003.91 100531	2002 - 3 full suites	No exceedances					
	Summary Row **A&Wc Attaining** **FC Attaining** **FBC Attaining**	**2002** **3 sampling events**	**No exceedances**					**ADEQ collected 3 samples in 2002. Assessed as "attaining all uses."**
Fish Creek headwaters - Black River AZ15060101-032 A&Wc, FC, FBC, AgI, AgL	ADEQ Biocriteria Program Near Bear Wallow Creek Wilderness SRFIS002.53 100553	1998 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	33	1 of 1		Lab reporting limits for dissolved copper and zinc too high to use results for assessment.
				varies by hardness (A&Wc chronic)	33	1 of 1		
	ADEQ Ambient Monitoring Above Black River SRFIS000.01 101200	2001 - 1 full suite 2002 - 2 full suites	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Inconclusive** **AgI Attaining** **AgL Attaining**	**1998 - 2002** **4 sampling events**	**Copper (dissolved)** **µg/L**	**varies by hardness** **(A&Wc acute)**	**<10 - 33**	**1 of 1 event** **(in 1998)**	**Inconclusive**	**ADEQ collected 4 samples at 2 sites in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to copper exceedance and missing core parameters: *Escherichia coli*, dissolved metals (copper and zinc).**
				varies by hardness **(A&Wc chronic)**	**<10 - 33**	**1 of 1 event** **(insufficient events)**	**Inconclusive**	

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Gibson Mine Tributary headwaters - Pinto Creek AZ15060103-887 A&Ww, FC, FBC (tributary rule)	ADEQ TMDL Program Above Pinto Creek SRGIM000.15 101071	2000 - 1 partial suite 2001 - 4 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	2100 - 5900	5 of 5		
				varies by hardness (A&Ww chronic)	2100 - 5900	5 of 5		
			Copper (total) µg/L	1300 (FBC)	2100 - 5900	5 of 5		
			pH (low) SU	6.5 - 9.0 (A&Ww, FBC)	5.5 - 6.5	1 of 4		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	96.0	1 of 1		
				varies by hardness (A&Ww chronic)	96.0	1 of 1		
	Summary Row A&Ww Not attaining FC Inconclusive FBC Inconclusive	2000 - 2001 5 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	2100 - 5900	5 of 5 samples 5 of 5 events (in 2000-2001)	Not attaining	ADEQ collected 5 samples at 2 sites in 2000-2001. Copper loadings for this tributary were addressed in the Pinto Creek TMDL approved by EPA in 2001. Assessed as "not attaining" due to copper exceedances. Placed on the Planning List for TMDL follow-up monitoring, pH and zinc exceedances, and missing core parameters: *Escherichia coli*, turbidity/SSC, dissolved metals (cadmium and zinc), and total mercury. Monitoring for a Phase II copper TMDL is ongoing.
				varies by hardness (A&Ww chronic)	2100 - 5900	5 of 5 samples 5 of 5 events (100% exceed)	Not attaining	
			Copper (total) µg/L	1300 (FBC)	2100 - 5900	5 of 5	Not attaining	
			pH (low) SU	6.5 - 9.0 (A&Ww, FBC)	6.49	1 of 4	Inconclusive	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	96.0	1 of 1	Inconclusive	
				varies by hardness (A&Ww acute)	96.0	1 of 1	Inconclusive	
Gold Gulch Canyon headwaters - Pinto Creek AZ15060103-894 A&We, PBC (tributary rule)	BHP Mining — NPDES Below Gold Gulch Weir MG1-12b	2002 - 1 field + metals	No exceedances					
	Summary Row A&We Inconclusive PBC Inconclusive	2002 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Greenback Creek headwaters - Tonto Creek AZ15060105-005 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Below Conway Ranch SRGRE005.74 101221	2001 - 1 full suite 2002 - 2 full suites	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgL Attaining**	**2001 - 2002** **3 sampling events**	**No exceedances**					**ADEQ collected 3 samples in 2001-2002. Assessed as "attaining all uses."**
Haigler Creek headwaters - unnamed reach at 34°12'23.5"/111°00'11" AZ15060105-012A A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Near Boy Scout Camp SRHAG004.41 100372	2001 - 1 full suite 2002 - 2 full + 1 partial suite	No exceedances					
	Summary Row **A&Wc Attaining** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**2001 - 2002** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2001-2002. Assessed as "attaining all uses."**
Haunted Canyon headwaters - Pinto Creek AZ15060103-879 A&Ww, FC, FBC (tributary rule)	ADEQ Ambient Monitoring Below Powers Gulch SRHNC002.41 101131	2000 - 1 partial suite 2001 - 1 full suite 2002 - 3 full suites	Dissolved oxygen mg/L	6.0 (90% saturation) (A&Ww)	5.5 - 8.6 (58.9 - 106.3%)	1 of 5		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	ADEQ TMDL Program At Carlota Weir HC-4 SRPNT002.29 101072	2000 - 2 partial suites 2001 - 2 field + copper	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining**	**2000 - 2002** **9 samples** **8 sampling events**	**No exceedances**					**ADEQ collected 9 samples at 2 sites in 2000-2002. Assessed as "attaining all uses."**
Hay Creek headwaters - West Fork Black River AZ15060101-353 A&Wc, FC, FBC, AgL Unique Water	ADEQ Ambient Monitoring Above West Fork Black River SRHAY000.02 101299	2001 - 1 full suite 2002 - 1 full suite	No exceedances					Missing core parameters: dissolved metals (cadmium, copper, and zinc). Lab reporting limits for dissolved cadmium, copper, and zinc samples were too high to use results for assessment.
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**2001 - 2002** **2 sampling events**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Miller Springs Canyon headwaters - Pinto Creek AZ15060103-892 A&Ww, FC, FBC (tributary rule)	BHP Mining MPO-1b Below Gold Gulch Weir	2000 - 1 field + metals 2001 - 4 field + metals 2002 - 3 field + metals	Selenium µg/L	2.0 (A&Ww chronic)	<5 - 3.7	4 of 4		Lab reporting limits for 4 additional selenium samples were too high to use results for assessment.
			Turbidity NTU	50 (A&Ww)	4 - 95	1 of 8		
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**2000 - 2002** **8 sampling events**	**Selenium** **µg/L**	**2.0** **(A&Ww chronic)**	**<5 - 3.7**	**4 of 4**	**Inconclusive*** **(see comment)**	**BHP collected 8 samples in 2000 - 2002. Assessed as "inconclusive" due to turbidity and selenium exceedances and missing core parameters: total mercury, dissolved oxygen, and *Escherichia coli*** *** BHP investigation indicates that selenium exceedances may be a laboratory method providing false positive results. See comment in Pinto Creek.**
			Turbidity **NTU**	**50** **(A&Ww)**	**4 - 95**	**1 of 8**	**Inconclusive**	
Pinal Creek Jesse Lane - Salt River AZ15060103-280D A&Ww, FBC, FC, AgL ***(After groundwater treatment plant installed in May 2001)***	USGS Special Investigation At Setka Ranch SRPNL005.78 101491	After May 2001 - 3 partial suites 2002 - 4 partial suites	No exceedances					Low dissolved oxygen due to naturally occurring ground water upwelling and low flow conditions, and not anthropogenic causes. Not considered in final assessment.
	Phelps Dodge & Hydro-GeoChem WQARF Monitoring At Pringle SRPNL005.78	After May 2001 - 8 partial suites 2002 - 11 partial suites	pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	6.2 - 7.7	1 of 19		
	USGS Special Investigation At Site Z4.7 SRPNL005.461 101507	After May 2001 - 1 partial suite	Dissolved oxygen mg/L	6.0 (A&Ww)	3.8	1 of 1		
	USGS Special Investigation At Site Z5 SRPNL005.37 101509	After May 2001 - 2 partial suites 2002 - 1 partial suites	Dissolved oxygen mg/L	6.0 (90% saturation) (A&Ww)	4.2 - 8.0 (20 - 97%)	1 of 3		
	USGS Special Investigation At Site Z5.7 SRPNL005.23 101510	After May 2001 - 3 partial suites 2002 - 4 partial suites	No exceedances					
	USGS Special Investigation At Site Z8.2 SRPNL005.17 101511	After May 2001 - 2 partial suites	No exceedances					
	USGS Special Investigation At Site Z7 SRPNL005.05 101513	After May 2001 - 2 partial suites 2002 - 3 partial suites	Dissolved oxygen mg/L	6.0 (A&Ww)	5.5 - 6.0	2 of 5		

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	USGS Special Investigation At Site Z8.3 SW SRPNL004.96 101515	2002 - 2 partial suites	No exceedances					
	USGS Special Investigation At Site Z9A SRPNL004.77 101516	After May 2001 - 3 partial suites 2002 - 4 partial suites	Dissolved oxygen mg/L	6.0 (A&Ww)	5.4 - 7.5	2 of 4		
	USGS Special Investigation At Site JJ15 SRPNL004.36 101518	After May 2001 - 1 partial suite	No exceedances					
	USGS Fixed Station At Inspiration Dam #09498400 SRPNL003.30 101727	After May 2001 - 4 full suites 2002 - 5 full suites	No exceedances					
	Summary Row **A summary of exceedances before and after treatments is shown by parameter in the comment column to the right. Only samples taken after the installation of the ground water remediation facility in 2001 are considered for the assessment in the final summary row below.**		**Beryllium (dissolved) µg/L**	**5.3 (A&Ww chronic)**	**Before treatment: <0.5 - 10 After 1999 treatment: <0.5 - 10 After 2001 treatment: 0.6 - <4.8**			**Before treatment: 5 of 13 After 1999 treatment: 0 of 14 After 2001 treatment: 0 of 7**
			Cadmium (dissolved) µg/L	**varies by hardness (A&Ww acute)**	**Before treatment: <0.5 - 54 After 1999 treatment: <0.5 - 10 After 2001 treatment: <0.5 - 4**			**Before treatment: 8 of 24 After 1999 treatment: 0 of 19 After 2001 treatment: 0 of 13**
				varies by hardness (A&Ww chronic)				**Before treatment: 14 of 24 After 1999 treatment: 0 of 19 After 2001 treatment: 0 of 13**
			Cadmium (total) µg/L	**50 (AgL)**	**Before treatment: <0.5 - 55 After 1999 treatment: <0.5 - 10 After 2001 treatment: <0.5 - <0.1**			**Before treatment: 1 of 48 After 1999 treatment: 0 of 50 After 2001 treatment: 0 of 12**
			Copper (dissolved) µg/L	**varies by hardness (A&Ww acute)**	**Before treatment: <1 - 283 After 1999 treatment: <1 - 70 After 2001 treatment: <1 - <30**			**Before treatment: 13 of 24 After 1999 treatment: 1 of 20 After 2001 treatment: 0 of 13**
				varies by hardness (A&Ww chronic)				**Before treatment: 18 of 24 After 1999 treatment: 1 of 20 After 2001 treatment: 0 of 13**
			Mercury (dissolved) µg/L	**0.01 (A&Ww chronic)**	**Before treatment: <0.1- 0.1 After 1999 treatment: <0.1 After 2001 treatment: <0.1**			**Before treatment: 1 of 1 (Sample result exceeding standard was at detection limit. Reporting limit too high on 9 other samples.) After 1999 treatment: (Reporting limits too high on 7 samples.) After 2001 treatment: (Reporting limits too high on 6 samples.)**

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Nickel (dissolved) µg/L	varies by hardness (A&Ww chronic)	Before treatment: <10 - 1190 After 1999 treatment: <10 - 350 After 2001 treatment: <50 - <90			Before treatment: 21 of 24 After 1999 treatment: 2 of 19 After 2001 treatment: 0 of 13
			pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	Before treatment: 5.4 - 8.2 After 1999 treatment: 6.1 - 7.7 After 2001 treatment: 6.2 - 7.7			Before treatment: 52 of 108 After 1999 treatment: 6 of 98 After 2001 treatment: 1 of 59
			Selenium (total) µg/L	2.0 (A&Ww chronic)	Before treatment: <1 - 8.7 After 1999 treatment: <1 - 1 After 2001 treatment: <1 - 8.7			Before treatment: 1 of 6 After 1999 treatment: 0 of 7 After 2001 treatment: 0 of 6
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	Before treatment: 3 - 1800 After 1999 treatment: 3 - 160 After 2001 treatment: 6 - 30			Before treatment: 18 of 24 After 1999 treatment: 0 of 19 After 2001 treatment: 0 of 13
				varies by hardness (A&Ww chronic)				Before treatment: 18 of 24 After 1999 treatment: 0 of 19 After 2001 treatment: 0 of 13
	Final Summary Row, considering only data after 2001 treatment initiated							
	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining	May 2001 - 2002 After treatment facility installed 59 total samples 13 sample events	pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	6.2 - 7.7	1 of 59	Attaining	USGS and Phelps Dodge collected 59 samples at 11 sites after the groundwater treatment plant was installed in May, 2001. The reach is assessed as "attaining all uses" Follow-up monitoring will continue, as post-treatment samples have been collected during a sustained drought.
Pinto Creek headwater - tributary at 33°19'27"/110°54'56" AZ15060103-018A A&Wc, FC, FBC, AgI, AgL	ADEQ TMDL Program At Simpson Dam SRPNT023.13	2001 - 2 field + copper	No exceedances					
	Summary Row A&Wc Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive	2001 2 sample events	No exceedances					Copper TMDL completed by EPA in 2001. Reach will remain assessed as "not attaining" until sufficient copper monitoring to show that all uses are meeting the copper standard. Insufficient monitoring data to assess.
Pinto Creek tributary at 33°19'27"/110°54'56" - Ripper Spring AZ15060103-018B A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program Above Henderson Ranch Mines SRPNT023.02 101039	2000 - 1 full suite 2001 - 3 field + copper	pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	6.1 - 7.8	1 of 3		
	ADEQ TMDL Program At Henderson Ranch Mines SRPNT023.00	2001 - 3 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	15.0 - 22.0	1 of 3		

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ TMDL Program At TS-2, below Henderson Ranch Mines SRPNT022.92	2001 - 1 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	2000	1of 1		
				varies by hardness (A&Ww chronic)	2000	1 of 1		
			Copper (total) µg/L	500 (AgL)	1900	1 of 1		
				1300 (FBC)	1900	1 of 1		
			pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.1	1 of 1		
				4.5 - 9.0 (AgI)	3.1	1 of 1		
	ADEQ TMDL Program Below Henderson Ranch Mines SRPNT022.89 101061	2000 - 1 full suite 2001 - 3 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	14.0 - 44.0	1 of 4		
				varies by hardness (A&Ww chronic)	14.0 - 44.0	3 of 4		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	390	1 of 1		
				varies by hardness (A&Ww chronic)	390	1 of 1		
	ADEQ TMDL Program Above Gibson Mine Tributary SRPNT021.31 101062	2000 - 1 full suite 2001 - 3 field +copper	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	15 - 40	3 of 5		
				varies by hardness (A&Ww chronic)	15 - 40	5 of 5		
			pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	5.9 - 8.4	1 of 4		
	ADEQ TMDL Program Below Gibson Mine Tributary SRPNT021.30 101063	2001 - 1 full suite	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	560	1 of 1		
				varies by hardness (A&Ww chronic)	560	1 of 1		
			Copper (total) µg/L	500 (AgL)	640	1 of 1		
	ADEQ TMDL Program At Old Highway 60 (PC-100) SRPNT020.65 101064	2000 - 1 full suite 2001 - 4 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	32 - 920	5 of 5		
				varies by hardness (A&Ww chronic)	32 - 920	5 of 5		

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Copper (total) µg/L	500 (AgL)	82 - 810	1 of 5		
			pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	5.6 - 7.9	1 of 5		
	ADEQ TMDL Program At Bronx tributary east of main adit (TS-4) SRPNT019.83	2001 - 1 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	360	1 of 1		
				varies by hardness (A&Ww chronic)	360	1 of 1		
	ADEQ TMDL Program At BHP 005 NPDES outfall SRPNT019.07	2001 - 1 field + copper	No exceedances					
	ADEQ TMDL Program Above Cactus Breccia SRPNT018.95	2001 - 1 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	33	1 of 1		
				varies by hardness (A&Ww chronic)	33	1 of 1		
	ADEQ TMDL Program Below Cactus Breccia SRPNT018.47	2001 - 1 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	47	1 of 1		
				varies by hardness (A&Ww chronic)	47	1 of 1		
	BHP Mining - NPDES AMP1 Above Cottonwood Gulch SRPNT019.41	1999 - 2 field + metals 2000 - 1 field + metals 2001 - 2 field + metals	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<4.0 - 78	1 of 5		
				varies by hardness (A&Ww chronic)	<4.0 - 78	2 of 5		
			Turbidity NTU	50 (A&Ww)	2.4 - 55.1	1 of 5		
	BHP Mining - NPDES AMP2 Above Cottonwood Gulch SRPNT018.91	1999 - 2 field + metals 2000 - 1 field + metals 2001 - 2 field + metals	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	9.0 - 71	1 of 5		
				varies by hardness (A&Ww chronic)	9.0 - 71	2 of 5		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1.0 - 3.0	1 of 5		
			Turbidity NTU	50 (A&Ww)	0.17 - 75.3	1 of 5		

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	BHP Mining - NPDES AMP3 below Cottonwood Gulch SRPNT018.49	1999 - 3 field + metals 2000 - 1 field + metals 2001 - 2 field + metals 2002 - 1 field + metals	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	24 - 78	2 of 7		
				varies by hardness (A&Ww chronic)	24 - 78	4 of 7		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1.0 - 4.9	2 of 7		
	BHP Mining - NPDES DW24 Below Miller Springs Gulch SRPNT017.60	1998 - 2 field + metals 1999 - 4 field + metals 2000 - 4 field + metals 2001 - 4 field + metals	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	4.0 - 63	1 of 15		
				varies by hardness (A&Ww chronic)	4.0 - 63	2 of 15		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1.0 - 4.4	4 of 12		
	BHP Mining - NPDES PC2UP Below Miller Springs Gulch SRPNT017.13	1998 - 2 field + metals 1999 - 4 field + metals 2000 - 4 field + metals 2001 - 4 field + metals	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<4.0 - 57	1 of 13		
				varies by hardness (A&Ww chronic)	<4.0 - 57	1 of 13		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1.0 - 3.3	2 of 12		
			Turbidity NTU	50 (A&Ww)	0.73 - 111.0	1 of 13		
	ADEQ TMDL Program At USGS Gage Below Haunted Canyon SRPNT016.18 101068	2000 - 2 full suites 2001 - 4 field + 3 copper	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 44	4 of 5		
				varies by hardness (A&Ww acute)	<10 - 44	3 of 5		
			Turbidity NTU	50 (A&Ww)	60.3	1 of 1		
	BHP Mining - NPDES AMP5 Below Gold Gulch Weir & Haunted Canyon	2002 - 1 field + metals	Selenium (total) µg/L	2.0 (A&Ww chronic)	2.5	1 of 1		
	BHP Mining - NPDES AMP4 - AMP4IS Below Gold Gulch Weir & Haunted Canyon SRPNT015.49	1998 - 2 field + metals 1999 - 4 field + metals 2000 - 4 field + metals 2001 - 4 field + metals 2002 - 3 field + metals	Selenium (total) µg/L	2.0 (A&Ww chronic)	<1.0 - 4.0	1 of 16		
			Turbidity NTU	50 (A&Ww)	1.3 - 160	4 of 17		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Reach Summary Row A&Ww Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Attaining	1998 - 2002 95 samples 22 sample events	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<3.0 - 2000	23 of 95 samples 6 of 22 events (in 2000 and 2001)	Not attaining	ADEQ & BHP's consultant collected 95 samples at 19 sites in 1998-2002. A copper TMDL was approved by EPA in 2001. Assessed as "not attaining" due to copper exceedances and placed on the Planning List for TMDL follow-up monitoring, exceedance of the zinc standard, and missing core parameters: *Escherichia coli*, total boron, and total mercury. *BHP investigated selenium exceedances in its dataset and found that the analytical method may be responsible for false positive laboratory results. Since use of an alternative laboratory analysis method, no further selenium exceedances have occurred. (Changed at all sites by the fall of 2002.)
				varies by hardness (A&Ww chronic)	<3.0 - 2000	34 of 95 samples 9 of 22 events (41% exceed)	Not attaining	
			Copper (total) µg/L	500 (AgL)	<4.0 - 1900	3 of 95	Attaining	
				1300 (FBC)	<4.0 - 1900	1 of 95	Attaining	
			pH (low) SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.1 - 8.7	4 of 87	Attaining	
				4.5 - 9.0 (AgI)	3.1 - 8.7	1 of 87	Attaining	
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1.0 - 4.9	11 of 57 samples 6 of 17 events (35% exceed)	Inconclusive (see comment*)	
			Turbidity NTU	50 (A&Ww)	0.2 - 160	8 of 69	Attaining	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	<4.1 - 390	1 of 69 samples 1 of 22 events (in 2000)	Inconclusive	
				varies by hardness (A&Ww chronic)	<4.1 - 390	1 of 69 samples 1 of 22 events (5% exceed)	Attaining	
Pinto Creek Ripper Spring Canyon - Roosevelt Lake AZ15060103-018C A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program At USGS Gage near Pinto Valley Weir SRPNT011.44 101070	2000 - 2 partial suites 2001 - 4 field + copper	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 39	2 of 6		
	ADEQ Fixed Station At Henderson Ford West of Globe SRPNT007.13 100346	1998 - 4 full suites 1999 - 3 full suites 2000 - 3 full suites 2001 - 5 full suites 2002 - 3 full suites	Selenium (total) µg/L	2.0 (A&Ww chronic)	<5.0 - 14.0	3 of 3		Lab reporting limits for 15 additional selenium samples were too high to use results for assessment.
			Turbidity NTU	50 (A&Ww)	0.3 - 180	2 of 17		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998 - 2002 24 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 39	2 of 24 samples 2 of 24 events (8% exceed)	Attaining	ADEQ collected 24 samples at 2 sites in 1998-2002. Assessed as "impaired" due to selenium exceedances. Note that the state laboratory used a different analytical method than the one suspected of causing false positive results for BHP (see comment in above reach).
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<5.0 - 14.0	3 of 3 samples 3 of 3 events (100% exceed)	Impaired	
			Turbidity NTU	50 (A&Ww)	0.3 - 160	2 of 19	Attaining	
Pinto Creek, West Fork headwaters - Pinto Creek AZ15060103-066 A&We, PBC (tributary rule)	ADEQ TMDL Program SRWPN000.01	2001 - 1 field + copper						
	Summary Row A&We Inconclusive PBC Inconclusive	2001 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Reservation Creek headwaters - Black River AZ15060101-010 A&Wc, FC, FBC, AgL	ADEQ Biocriteria Program Above Black River SRRES000.30 100629	1998 - 1 partial suite	No exceedances					Lab reporting limits for dissolved cadmium and copper samples were too high to use results for assessment.
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	1998 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Rye Creek headwaters - Tonto Creek AZ15060105-014 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring 100 meters above bridge SRRYE000.97 101297	2002 - 4 full suites	Dissolved oxygen mg/L	6.0 (90% saturation) (A&Ww)	2.72 - 7.42 (34.9 - 76.2%)	2 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling and low flow conditions, and not anthropogenic causes. Not considered in final assessment.
	Summary Row A&Ww Attaining FC Attaining FBC Inconclusive AgL Attaining	2002 4 sampling events	No exceedances					ADEQ collected 4 samples in 2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameter: *Escherichia coli*.
Salt River Pinal Creek - Roosevelt Lake AZ15060103-004 A&Ww, FC, FBC, AgI, AgL ***(Before Rodeo-Chediski Wildfire)***	USGS Fixed Station #09498500 Above Roosevelt Lake SRSLR055.31 100745	1998 - 3 full + 5 partial suites 1999 - 5 full + 1 partial suite 2000 - 3 full + 1 partial suite 2001 - 3 full + 1 partial suite 2002 - 2 full suites	Nitrogen (total) mg/L	2.0 (A&Ww)	0.63 - 2.1	1 of 4		
			Suspended Sediment Concentration mg/L	80 Geometric mean (A&Ww)	1 - 1300	see comment below		
			Turbidity NTU	50 (A&Ww)	0.57 - 180	3 of 20		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	(Before wildfire) Summary Row A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998 - June 2002 24 samples 24 sampling events	Nitrogen (total) mg/L	2.0 (A&Ww)	0.63 - 2.1	1 of 4	Inconclusive	After wildfire data and final assessment indicated below.
			Suspended Sediment Conc. mg/L	80 geometric mean (A&Ww)	1 - 1300 (geometric mean not calculated)	see comment in final assessment below	Inconclusive	
			Turbidity NTU	50 (A&Ww)	0.57 - 180	3 of 20	Attaining	
(After Rodeo-Chediski Wildfire)	USGS Fixed Station #09498500 Above Roosevelt Lake SRSLR055.31 100745	2002 - 5 full + 3 partial suties	Arsenic (total) µg/L	50) (FBC)	9 - 127	2 exceed July-Aug 5 attaining after		
			Chromium (total) µg/L	100 (FBC)	<1 - 168	2 exceed July-Aug 4 attaining after		
			Cyanide (total) µg/L	41 (A&Ww acute)	<10 - 120	2 exceed July-Aug 4 attaining after		
				9.7 (A&Ww chronic)	<10 - 120	2 exceed July-Aug 4 attaining after		
			Dissolved Oxygen mg/L	6.0 (A&Ww)	0.1 - 10.3	2 exceed July-Aug 6 attaining after		
			Escherichia coli CFU/100ml	235 (A&Ww)	18 - 2700	1 exceed July 1 attaining after		
			Lead (total) µg/L	15 (FBC)	<2 - 688	2 exceed July-Aug 4 attaining after		
				100 (AgL)	<2 - 688	2 exceed July-Aug 4 attaining after		
			Manganese (total) µg/L	10,000 (AgI)	20 - 37800	2 exceed July-Aug 5 attaining after		
			Nitrogen (total) mg/L	2.0 (A&Ww)	2.4 - 220	4 exceed July-Sept 1 attaining after		
			Phosphorus (total) mg/L	1.0 (A&Ww)	0.11 - 39	2 exceed July-Aug 4 attaining after		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1 - 3	1 exceed July 5 attaining after		
			Suspended Sediment Concentration mg/L	80 Geometric mean (A&Ww)	561 - 25800	see comment below		

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Turbidity NTU	50 (A&Ww)	2.8 - 51000	5 exceed July-Sept 2 attaining after		
	Univ. of Az Reservoir Study Salt 1 - Above Roosevelt Lake SRSLR055.23	2002 - 2 suites	Turbidity NTU	50 (A&Ww)	5.43 - 3000	1 of 2		
	(After Wildfire) Summary Row A&Ww Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	After June 2002 10 samples 8 sampling events	Arsenic (total) µg/L	50) (FBC)	9 - 127	2 exceed July-Aug 6 attaining after	Attaining (see comment)	USGS & Univ. of Arizona collected 10 samples at 2 sites after the Rodeo-Chediski Wildfire in June 2002. Many parameters exceeded standards immediately after the Rodeo-Chediski Fire. Arizona's Impaired Waters Identification rule indicates that listings should be restricted to parameters where exceedances are persistent, recurring, or seasonal. Sufficient samples have been collected to show that most impairment due to the fire was temporary and therefore not subject to listing. Arizona has been experiencing a significant drought. Routine sampling will continue in this area to determine if there are residual impacts from the fire when precipitation occurs. Reach assessed as "attaining some uses" and placed on the Planning List due to: 1. Insufficient *Escherichia coli* and nitrogen samples following the fire, 2. Potential exceedances of the SSC geometric mean standard occurred before the wildfire, and insufficient samples have been taken following the wildfire to support an assessment. (See discussion in Chapter III.)
			Chromium (total) µg/L	100 (FBC)	<1 - 168	2 exceed July-Aug 5 attaining after	Attaining (see comment)	
			Cyanide (total) µg/L	41 (A&Ww acute)	<10 - 120	2 exceed July-Aug 4 attaining after	Attaining (see comment)	
				9.7 (A&Ww chronic)	<10 - 120	2 exceed July-Aug 4 attaining after	Attaining (see comment)	
			Dissolved Oxygen mg/L	6.0 (A&Ww)	0.1 - 12.7	2 exceed July-Aug 8 attaining after	Attaining (see comment)	
			Escherichia coli CFU/100ml	235 (A&Ww)	18 - 2700	1 exceed July 1 attaining after	Inconclusive	
			Lead (total) µg/L	15 (FBC)	1 - 688	2 exceed July-Aug 6 attaining after	Attaining (see comment)	
				100 (AgL)	1 - 686	2 exceed July-Aug 6 attaining after	Attaining (see comment)	
			Manganese (total) µg/L	10,000 (AgI)	20 - 37800	2 exceed July-Aug 6 attaining after	Attaining (see comment)	
			Nitrogen (total) mg/L	2.0 (A&Ww)	2.4 - 220	4 exceed July-Sept 1 attaining after	Inconclusive	
			Phosphorus (total) mg/L	1.0 (A&Ww)	0.11 - 39	2 exceed July-Aug 4 attaining after	Attaining (see comment)	
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<1 - 3	1 exceed July 5 attaining after	Attaining (see comment)	

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Turbidity NTU	50 (A&Ww)	2.8 - 51,000	5 exceed July-Sept 2 attaining after	Attaining (see comment)	
Salt River Roosevelt Lake - Apache Lake AZ15060106A-024 A&Wc, FC, FBC, DWS, AgI, AgL	Univ. of Az. Reservoir Study Salt 2 Below Roosevelt Lake SRSLR031.45	2002 - 1 Field	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive	2002 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.
Salt River Stewart Mountain Dam - Verde River AZ15060106A-003 A&Wc, FC, FBC, DWS, AgI, AgL	SRP Ambient Monitoring Below Stewart Mtn. Dam SRSLR031.94	1998 - 12 partial suites 1999 - 12 partial suites 2000 - 14 partial suites 2001 - 11 partial suites 2002 - 12 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 26	3 of 62 (All in 1999)		Lab reporting limits for 55 additional total selenium samples were too high to use results for assessment.
				varies by hardness (A&Ww chronic)	<10 - 26	3 of 62 (All in 1999)		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<5 - 14	6 of 6		
	USFS 319(h) Project Site 1 - Saguaro Lake Ranch SRSLR031.89	2001 - 9 *Escherichia coli* 2002 - 10 *Escherichia coli*	No exceedances					
	AGFD Routine Monitoring Below Stewart Mt. Dam SRSLR031.66	1999 - 1 field + nutrients 2000 - 1 field + nutrients	No exceedances					
	USFS 319(h) Project Site 2 - Blue Point Bridge SRSLR030.28	2001 - 9 *Escherichia coli* 2002 - 10 *Escherichia coli*	No exceedances					
	USGS Fixed Station Site #09502000 Below Stewart Mt. Dam SRSLR030.22	1999 - 3 full suites 2000 - 6 full suites 2001 - 5 full suites 2002 - 4 full suites	Dissolved oxygen mg/L	> 7.0 (A&Wc)	4.1 - 12	6 of 18		
	USFS 319(h) Project Site 3 - Bushnell 4 SRSLR028.62	2001 - 9 *Escherichia coli* 2002 - 10 *Escherichia coli*	No exceedances					
	USGS Ambient Monitoring Near Coon Bluff SRSLR027.59	1999 - 1 full suite	No exceedances					

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Univ. of Az. Reservoir Study Salt 3 - Above Verde River SRSLR027.28	2002 - 1 field	No exceedances					
	USFS 319(h) Project Site 4 - Phon-D-Sutton Above Verde River SRSLR027.06	2001 - 9 *Escherichia coli* 2002 - 10 *Escherichia coli*	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - 300	2 of 19		
	Summary Row A&Wc Impaired FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining	1998 - 2002 147 samples 102 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Wc acute)	<1 - 26	3 of 81 events (not exceeded in last 3 years)	Attaining	Multiple agencies collected a total of 147 samples at 9 sites in 1998 - 2002. Assessed as "impaired" due to low dissolved oxygen. ADEQ assessed the FBC designated use as "inconclusive" and placed it on the Planning List for the following reasons: - One of the two *E. coli* exceedances was very close to the standard (result is 240, standard is 235), -The bacterial lab method provides an estimate of bacterial density (see discussion in Chapter III) - The two exceedances represent e small proportion of the total number of samples on this reach (2 of 96 samples, 2 of 40 events).
				varies by hardness (A&Wc chronic)	<1 - 26	3 of 81 samples 3 of 81 events (4% exceed)	Attaining	
			Dissolved oxygen mg/L	> 7.0 (A&Wc)	4.1 - 15.7	6 of 21	Impaired	
			Escherichia coli CFU/100ml	235 (FBC)	1 - 300	2 of 96 samples 2 of 40 events (in 2001 and 2002)	Inconclusive (see comment)	
Snake Creek headwaters - Black River AZ15060101-045 A&Wc, FC, FBC, AgL Unique Water	ADEQ Biocriteria Program Near Bear Wallow Wilderness SRSNK001.19 100643	1998 - 1 partial suite	No exceedances					Lab reporting limits for dissolved copper were too high to use results for assessment.
	ADEQ Ambient Monitoring Above Black River SRSNK000.84 101298	2001 - 1 full suite 2002 - 1 full suite	No exceedences					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	1998-2002 3 sampling events	No exceedances					ADEQ collected 3 samples at 2 sites in 1998-2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (copper and zinc), and total metals (mercury, copper and lead).

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Spring Creek headwaters -Tonto Creek AZ15060105-010 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring West of Young SRSPI006.79 100380	2001 - 1 partial suite 2002 - 2 full + 1 partial suites	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Inconclusive** **AgL Attaining**	**2001 - 2002** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 2001-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameter: *Escherichia coli*.**
Stinky Creek Fort Apache Reservation - West Fork Black River AZ15060101-352A A&Wc, FC, FBC, AgL Unique Water	ADEQ Biocriteria Program Downstream of Road #116 SRSTI001.76 100652	1998 - 1 partial suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.54 (83%)	1 of 1		Lab reporting limits for dissolved cadmium, copper, and zinc were too high to use results for assessment. Low dissolved oxygen due to naturally occurring low flow conditions and pooling, and not anthropogenic causes. Not considered in final assessment.
	ADEQ Ambient Above West Fork Black River SRSTI000.25 101303	2001 - 1 full suite 2002 - 1 partial suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.52 - 8.15 (80.8 - 84.4%)	1 of 2		
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998 - 2002** **3 sampling events**	**No exceedances**					**ADEQ collected 3 samples at 2 sites in 1998-2002. Assessed as "Inconclusive" due to missing core parameters: *Escherichia coli*, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, copper and lead).**
Tonto Creek headwaters - unnamed tributary at 34°18'10"/111°04'14" AZ15060105-013A A&Wc, FC, FBC, AgI, AgL	ADEQ TMDL Program At headwater spring, Above AGFD Fish Hatchery SRTON073.00 101016	2000 - 3 partial suites 2002 - 6 field + nutrients	No exceedances					
	ADEQ Ambient Monitoring At headwater spring, Below hatchery monitoring point SRTON043.98 100350	1999 - 1 nutrients	No exceedances					
	ADEQ TMDL Program Below AGFD Fish Hatchery Outfall SRTON072.66 101017	2000 - 3 partial suites 2002 - 6 field + nutrients	Nitrogen mg/L	0.5 annual mean (A&Wc)	0.29 - 0.74 (0.64 annual mean)	1 of 1 year (2002)		
	ADEQ Ambient Monitoring Below AGFD Fish Hatchery, North of Kohl's Ranch SRTON043.52 100351	1999 - 1 nutrients 2001 - 1 full suite 2002 - 3 full suites	No exceedances					

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ TMDL Program Above Baptist Camp and Dick Williams Creek SRTON071.72 101018	2000 - 3 field partial suites 2002 - 6 field + nutrients	No exceedances					
	ADEQ TMDL Program Below Baptist Camp road SRTON070.86 101019	2000 - 3 field, nutrients, + Escherichia coli 2002 - 6 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.7 - 9.1 (89 - 113%)	1 of 9		
	ADEQ TMDL Program Above Horton Creek SRTON069.87 101020	2000 - 3 partial suites 2002 - 6 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.4 - 17.1 (86 - 166%)	2 of 9		
			Escherichia coli CFU/100ml	235 (A&Wc)	12 - 659	1 of 3		
	ADEQ TMDL Program Below Horton Creek SRTON069.80 101021	2000 - 3 partial suites 2002 - 6 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.5 - 10.3 (86 - 104%)	1 of 9		
			Escherichia coli CFU/100ml	235 (A&Wc)	33 - 436	1 of 3		
	ADEQ TMDL Program Above USGS gage site SRTON068.97 101629	2000 - 2 *Escherichia coli*	No exceedances					
	ADEQ TMDL Program Above Highway 260, USGS gage site SRTON068.95 101022	2000 - 3 partial suites 2002 - 6 field + nutrients	Turbidity NTU	10 (A&Wc)	3.42 - 172	3 of 9		
	ADEQ TMDL Program Below Kohls Ranch, Above Tontozona SRTON068.00 101023	2000 - 3 partial suites 2002 - 6 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	4.9 - 7.8 (60 - 105%)	6 of 9		
			Turbidity NTU	10 (A&Wc)	3.3 - 249	3 of 9		
	ADEQ TMDL Program Above Christopher Creek SRTON066.90 101024	2000 - 3 partial suites 2002 - 6 field + nutrients	Turbidity NTU	10 (A&Wc)	7.9 - 193	5 of 9		
	ADEQ Fixed Station Below Christopher Creek SRTON038.81 100360	1999 - 3 full suites 2000 - 3 full suites 2001 - 5 full suites 2002 - 4 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.3 - 11.6 (77 - 103%)	1 of 14		
			Turbidity NTU	10 (A&Wc)	1.4 - 71.8	8 of 14		

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1999 - 2002 103 samples 15 sampling events	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	4.9 - 17.1 (60 - 166%)	11 of 99	Attaining	ADEQ collected 103 samples at 13 sites in 1999-2002. Turbidity exceedances indicate impairment based on the former turbidity standard. Assessed as "not attaining" until sufficient turbidity or suspended sediment concentration data are collected to make an assessment of "attaining" or "impaired." Also on the Planning List due to *Escherichia coli* and nitrogen exceedances.
			Escherichia coli CFU/100ml	235 (FBC)	<1 - 659	1 of 15 events (in 2000)	Inconclusive	
			Nitrogen mg/L	0.5 annual mean (A&Wc)	0.29 - 0.74 (0.64 annual mean)	1 of 1 annual mean (2002)	Inconclusive	
			Turbidity NTU	10 (A&Wc)	1.3 - 249	19 of 99 (19 of 41 below USGS gage)	Not attaining (see comment)	
Tonto Creek unnamed tributary at 34°18'10"/111°04'14" to Haigler Creek AZ15060105-013B A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program Above Bear Flats SRTON065.38 101025	2000 - 3 partial suites 2002 - 6 field + nutrients	*Escherichia coli* CFU/100ml	235 (FBC)	1 - 344	2 of 3		1 *Escherichia coli* exceedance was related to a storm
			Nitrogen mg/L	2.0 (A&Ww)	0.21 - 2.8	1 of 9		
				0.5 annual mean (A&Ww)	0.21 - 2.8 0.56 annual mean	1 of 1 year (2002)		
			Turbidity NTU	50 (A&Ww)	16 - 898	3 of 9		
	ADEQ Ambient Monitoring Above Bear Flats, South of Kohls Ranch SRTON038.32 100357	2002 - 1 metals suite	No exceedances					Dissolved metals could not be assessed due to lack of water hardness data. Only total metal results were assessed.
	ADEQ TMDL Program Below Bear Flats access road SRTON064.22 101026	2000 - 3 partial suites 2002 - 6 field + nutrients	*Escherichia coli* CFU/100ml	235 (FBC)	5 - 525	1 of 3		
			Turbidity NTU	50 (A&Ww)	19.1 - 119	3 of 9		
	ADEQ Ambient Monitoring Below Bear Flats, south of Kohls Ranch SRTON037.17 100358	2001 - 1 full suite 2002 - 3 full suites	Turbidity NTU	50 (A&Ww)	2.4 - 82.7	1 of 4		

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	2000 - 2002 23 samples 13 sampling events	*Escherichia coli* CFU/100ml	235 (FBC)	1 - 525	3 of 7 samples 2 of 7 events (in 2000)	Inconclusive (see comment)	ADEQ collected 23 samples at 4 sites in 2000 - 2002. Assessed as "not attaining" due to exceedances of the former turbidity standard. Turbidity exceedances indicate impairment based on the former standard. Assessed as "not attaining" until sufficient turbidity or suspended sediment concentration data are collected to make an assessment of "attaining" or "impaired." ADEQ assessed the FBC designated use as "inconclusive"and placed the reach on the Planning List for the following reasons: - One of the two *Escherichia coli* exceedances was very close to the standard (result is 272, standard is 235). -The bacterial lab method provides an estimate of bacterial density (see discussion in Chapter III) This reach is also on the Planning List due to nitrogen exceedances.
			Nitrogen mg/L	2.0 (A&Ww)	0.21 - 2.8	1 of 20	Attaining	
				0.5 annual mean (A&Ww)	0.21 - 2.8 (0.56 annual mean)	1 of 1 year (in 2002)	Inconclusive	
			Turbidity NTU	50 (A&Ww)	2.4 - 898	7 of 21	Not attaining (see comment)	
Tonto Creek Rye Creek - Gun Creek AZ15060105-008 A&Ww, FC, FBC, AgI, AgL	ADEQ Fixed Station Above USGS gage Near Jakes Corner SRTON015.88 100349	1998 - 4 full suites 1999 - 3 full suites 2000 - 3 full suites 2001 - 5 full suites 2002 - 2 partial + 1 full suite	No exceedances					
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998 - 2002 18 sampling events	No exceedances					ADEQ collected 18 samples in 1998-2002. Assessed as "attaining all uses."

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
LAKE MONITORING DATA								
Apache Lake AZL15060106A-0070 A&Wc, FC, FBC, DWS, AgI, AgL	AGFD Routine Monitoring SRAPA - A1 (site A1)	2001- 4 field + nutrients	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	2.3 - 8.9	2 of 4		Some nitrogen and phosphorus samples were obtained, but were not composite samples at 1, 2 & 5 meters depth as required for nutrient standards for this lake (R18-11-109.G Footnote 6). Therefore, these nutrient samples were not considered in the final assessment and do not count as core parameter samples.
	AGFD Routine Monitoring SRAPA - A2 (site A2)	2001- 5 field + nutrients	No exceedances					
	AGFD Routine Monitoring SRAPA - A3 (site A3)	2001- 5 field + nutrients	No exceedances					
	AGFD Routine Monitoring SRAPA - BC (Burnt Corral)	1999 - 4 partial suites	No exceedances					
	AGFD Routine Monitoring SRAPA - A (dam site)	1999 - 4 partial suites	No exceedances					
	AGFD Routine Monitoring SRAPA - TR (Turtle Rock)	1999 - 3 partial suites	No exceedances					
	AGFD Urban Lakes Study SRAPA - A (deepest)	2002 - 2 partial suites	No exceedances					
	AGFD Urban Lakes Study SRAPA - B (mid lake)	2002 - 1 partial suites	No exceedances					
	AGFD Urban Lakes Study SRAPA (Site C)	2002 - 1 field	No exceedances					
	Univ. of Az. Reservoir Study SRAPA - A (Site A)	1999 - 4 partial suites 2000 - 8 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.7 - 10.7 (67 - 120%)	1 of 4		
			pH (high) SU	6.5 - 9.0 (A&Wc, FBC, AgL AgL, DWS)	7.8 - 9.3	1 of 12		
	Univ. of Az. Reservoir Study SRAPA - B (Site B)	1999 - 4 partial suites 2000 - 8 partial suites	No exceedances					
	Univ. of Az. Reservoir Study SRAPA - C (Site C)	1999 - 4 field 2000 - 8 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	1.2 - 8.9 (12 - 84%)	4 of 5		
	ADEQ Lakes Program SRAPA - A (deepest) 100997	2000 - 1 suite 2001 - 1 field + VOCs	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.0 - 15.5 (60 - 182%)	1 of 2		Field staff documented recent lake turnover which caused the low dissolved oxygen and not anthropogenic causes. Therefore, this naturally occurring low dissolved oxygen was not included in the final assessment.
	ADEQ Lakes Program SRAPA-MAR (marina) 100998	2000 - 1 suite 2001 - 1 field + VOCs	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.6 - 14.8 (79 - 182%)	1 of 2		
	ADEQ Lakes Program SRAPA-E 100008	2000 - 1 suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.4 (77%)	1 of 1		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Inconclusive AgI Attaining AgL Attaining	1998 - 2002 70 samples 24 sampling events	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	1.1 - 15.5 (12-120%)	7 of 45	Inconclusive	Univ. of Arizona's Reservoir Monitoring Project, AGFD, and ADEQ collected a total of 70 samples during 24 sampling events in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to low dissolved oxygen and missing core parameters: *Escherichia coli*, phosphorus, nitrogen, and fluoride.
			pH (high) SU	6.5 - 9.0 (A&Wc, FBC, DWS, AgL, AgI)	7.4 - 9.3	1 of 70	Attaining	
Big Lake AZL15060101-0160 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Lakes Program SRBIG - A (dam site) 101322	2001 - 1 partial suite	No exceedances					
	ADEQ Lakes Program SRBIG - B (Mid lake) 101355	2002 - 2 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.6 - 10.1 (68 - 85%)	1 of 2		
	ADEQ Lakes Program SRBIG - D 100013	2002 - 1 field	No exceedances					
	ADEQ Lakes Program SRBIG - SH (shoreline) 101358	2002 - 1 *Escherichia coli*	No exceedances					
	ADEQ Lakes Program SRBIG - SBR (west of floating dock) 101359	2002 - 1 *Escherichia coli*	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining	2001 - 2002 6 total samples 3 sampling events	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.6 - 10.6	1 of 4	Inconclusive	ADEQ collected 6 samples during 3 sampling events in 2001-2002. Assessed as "attaining some uses" and added to the Planning List due to low dissolved oxygen and missing core parameters: *Escherichia coli* and dissolved cadmium.
Canyon Lake AZL15060106A-0250 A&Wc, FC, FBC, DWS, AgI, AgL	Univ. of Az. Reservoir Study SRCAN - A (deeepest)	1999 - 4 partial suites 2000 - 8 partial suites	No exceedances					Some nitrogen and phosphorus samples were obtained, but were not composite samples at 1, 2 & 5 meters depth as required for nutrient standards for this lake (R18-11-109.G Footnote 6). Therefore, these nutrient samples were not considered in the final assessment and do not count as core parameter samples.
	Univ. of Az. Reservoir Study SRCAN - B (mid lake)	1999 - 4 partial suites 2000 - 8 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.7 - 10.7 (87 - 100%)	1 of 7		
	Univ. of Az. Reservoir Study SRCAN - C (site C)	1999 - 4 partial suites 2000 - 8 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	2.1 - 9.8 (24 - 89%)	3 of 5		
	AGFD Urban Lakes Program SRCAN - A (site A)	2002 - 2 partial suites	Ammonia mg/L	varies by pH & temperature (A&Wc)	0.07 - 0.47	1 of 2		
	AGFD Urban Lakes Program SRCAN - B (site B)	2002 - 2 partial suites	No exceedances					
	AGFD Routine Monitoring SRCAN - C1 (site C1)	2001 - 5 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	2.2 - 8.5	2 of 5		
	AGFD Routine Monitoring SRCAN - C2 (site C2)	2001 - 5 partial suites	No exceedances					

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	AGFD Routine Monitoring SRCAN - C3 (site C3)	2001 - 5 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.7 - 10.2	1 of 5		
	AGFD Routine Monitoring SRCAN - Mid Basin	1998 - 1 partial suite	No exceedances					
	AGFD Routine Monitoring SRCAN - Up Lake	1998 - 1 partial suite	No exceedances					
	Summary Row **A&Wc Impaired** **FC Inconclusive** **FBC Inconclusive** **DWS Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1999-2000** **49 samples** **20 sampling events**	**Ammonia** **mg/L**	**varies by pH & temperature (A&Wc)**	**0.1 - 0.47**	**1 of 44** **1 of 20 events** **(5% exceed)**	**Attaining**	**Univ. of Arizona's Reservoir Monitoring Project and AGFD collected 49 samples during 20 sampling events in 1998-2002. Assessed as "impaired" due to low dissolved oxygen.** **Also on the Planning List due to missing core parameters: *Escherichia coli*, total fluoride, total boron, nitrate, nitrogen, phosphorus, total metals (mercury, arsenic, chromium, lead, and copper), and dissolved metals (copper, cadmium, and zinc).**
			Dissolved oxygen **mg/L**	**> 7.0** **(90% saturation)** **(A&Wc)**	**2.2 - 10.7**	**7 of 35**	**Impaired**	
Crescent Lake AZL15060101-0420 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program SRCRE - B (mid lake) 100993	1999 - 1 partial suite 2001 - 1 partial suite 2002 - 2 full suites	pH (high) SU	6.5 - 9.0 (A&Wc, FBC, AgL, AgI)	7.6 - 9.8	2 of 4		Lab reporting limits for copper and cadmium were too high to use results for assessment.
			Nitrogen mg/L	2.0 (A&Wc)	1.56 - 2.05	1 of 4		
	ADEQ Lakes Program SRCRE - BR (boat ramp) 101320	2002 - 2 Escherichia coli (same date as at B)	No exceedances					
	AGFD Lakes Program SRCRE - Mid Lake 101320	1998 - 2 partial suite 2001 - 1 partial suite	No exceedances					
	AGFD Lakes Program SRCRE - Dam Site 101320	1998 - 2 partial suite	pH (high) SU	6.5 - 9.0 (A&Wc, FBC, AgI, AgL)	8.5 - 9.6	1 of 2		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Impaired FC Attaining FBC Impaired Agl Impaired AgL Impaired	1998 - 2002 11 samples 8 sampling events	pH (high) SU	6.5 - 9.0 (A&Wc, FBC, Agl, AgL)	7.6 - 9.8	3 of 9	Inconclusive (Impaired*)	ADEQ and AGFD collected 11 samples during from 4 sites in 1998-2002. Assessed as "Impaired" due to pH exceedances. *EPA placed this reach on the 2002 303(d) List due to pH exceedances in 5 of 7 samples. Once listed, the surface water cannot be delisted until a TMDL is complete or data indicate that designated uses are being attained. On the Planning List due to: 1. Total nitrogen exceedances, 2. Missing core parameters: *Escherichia coli*, turbidity, and dissolved metals (copper and cadmium) 3. Recurrent fish kills, the most recent occurring in 1998. Fish kills may be evidence of a narrative standard violation.
			Nitrogen (total) mg/L	2.0 (A&Wc)	1.00 - 2.05	1 of 9	Inconclusive	
Roosevelt Lake AZL15060103-1240 A&Ww, FC, FBC, DWS, Agl, AgL ***(Before Rodeo-Chediski Wildfire)***	Univ. of Az. Reservoir Study SRROO - A (deepest)	1999 - 4 partial suites 2000 - 8 partial suites	Dissolved oxygen mg/L	6.0 (90% saturation) (A&Ww)	4.9 - 10.5	1 of 4		Some nitrogen and phosphorus samples were obtained, but were not composite samples at 1, 2 & 5 meters depth as required for nutrient standards for this lake (R18-11-109.G Footnote 6). Therefore, these nutrient samples were not considered in the final assessment and do not count as core parameter samples.
	Univ. of Az. Reservoir Study SRROO - B (mid lake)	1999 - 4 partial suites 2000 - 6 partial suites	Turbidity NTU	25 (A&Ww)	2.1 - 112	5 of 10		
	Univ. of Az. Reservoir Study SRROO - B2	1999 - 4 partial suites 2000 - 8 partial suites	Turbidity NTU	25 (A&Ww)	2.0 - 83	4 of 12		
	Univ. of Az. Reservoir Study SRROO - C	2000 - 1 partial suite	Turbidity NTU	25 (A&Ww)	44.7	1 of 1		
	Univ. of Az. Reservoir Study SRROO - C2	1999 - 1 partial suite	No exceedances					
	AGFD Urban Lakes Program SRROO - A (deepest)	2002 - 2 partial suites	Manganese (total) µg/L	980 (DWS)	220 - 1040	1 of 2		
	AGFD Urban Lakes Program SRROO - B (mid lake)	2002 - 2 partial suites	Turbidity NTU	25 (A&Ww)	10.9 - 40.8	1 of 2		
	AGFD Urban Lakes Program SRROO - C	2002 - 2 partial suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.2 - 11.3	1 of 2		
	AGFD Routine Monitoring SRROO (Windy Hill site)	2000 - 5 partial suites 2002 - 1 partial suite	No exceedances					
	AGFD Routine Monitoring Between Hill & Dam SRROO	2002 - 1 partial suite	Copper (total) µg/L	500 (AgL)	715	1 of 1		
	AGFD Routine Monitoring SRROO (R3 site)	2001 - 5 partial suites	No exceedances					
	AGFD Routine Monitoring SRROO (Salt River arm)	2000 - 8 partial suites 2001 - 3 partial suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.6 - 13.2	1 of 12		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	AGFD Routine Monitoring SRROO (dam site)	2000 - 10 partial suites 2001 - 4 partial suites 2002 - 2 partial suites	No exceedances					
	AGFD Routine Monitoring SRROO (Tonto Creek arm)	2000 - 9 partial suites 2001 - 3 partial suites 2002 - 1 partial suite	No exceedances					
	ADEQ Clean Lakes Program SRROO - A (deepest) 100075	2000 - 1 partial suite 2001 - 1 partial suite	No exceedances					
	ADEQ Clean Lakes Program SRROO - B (mid lake) 100076	2000 - 1 partial suite	No exceedances					
	ADEQ Clean Lakes Program SRROO - C 100077	2000 - 1 partial suite 2001 - 1 partial suite	No exceedances					
	(Before Rodeo-Chediski Fire) Summary Row A&Ww Not attaining FC Attaining FBC Inconclusive DWS Attaining Agl Attaining AgL Attaining	1999 - 2002 95 samples 30 sampling events Final assessment	Copper (total) µg/L	500 (AgL)	5 - 715	1 of 21	Attaining	Univ. of Arizona Reservoir Monitoring Project, ADEQ, & AGFD collected a total of 95 samples at 17 sites in 1998 - 2002. Turbidity exceedances indicate impairment based on the former turbidity standard. Assessed as "not attaining" until sufficient turbidity or suspended sediment concentration data are collected to make an assessment of "attaining" or "impaired." Also on the Planning List missing core parameters: *Escherichia coli*, total nitrogen, and total phosphorus.
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.2 - 12.4	3 of 78	Attaining	
			Manganese (total) µg/L	980 (DWS)	5 - 1040	1 of 47	Attaining	
			Turbidity NTU	25 (A&Ww)	0.05 - 112	11 of 46	Not attaining (see comment)	
Roosevelt Lake AZL15060103-1240 A&Ww, FC, FBC, DWS, Agl, AgL ***(After Rodeo-Chediski Wildfire)***	AGFD Routine Monitoring Salt Arm Inflow/Salt Mouth SRROO - AGFD	2002 - 2 suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.4	1 of 1		These AGFD samples were assessed separately to show the impacts of the Rodeo-Chediski Wildfire in June 2002 on Roosevelt Lake. Two samples were obtained after the fire, July 19, 2002 and October 8, 2002. Exceedances occurred only in the July sampling event.
			Lead (total) µg/L	15 (FBC, DWS)	<10 - 35	1 of 2		
			Manganese (total) µg/L	98 (DWS)	84 - 1680	1 of 2		
			Nitrogen (total) mg/L	1.00 (A&Ww)	0.58 - 5.31	1 of 2		
			Phosphorus (total) mg/L	0.6 (A&Ww)	0.10 - 1.67	1 of 2		

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row (Post Rodeo-Chediski Fire)	**July & October 2002 2 total samples 2 sample events (After Rodeo-Chediski Wildfire in June 2002. Not used in assessment. See comments.)**	**Dissolved oxygen mg/L**	**> 6.0 (90% saturation) (A&Ww)**	**5.4**	**1 of 1**	**Not assessed**	**AGFD collected 2 samples after the Rodeo-Chediski Wildfire near the Salt River mouth to Roosevelt Lake. Several parameters exceeded standards immediately after the Rodeo-Chediski Fire. Arizona's Impaired Waters Identification rule indicates that listings should be restricted to parameters where exceedances are persistent, recurring, or seasonal. Sufficient samples have been collected in the Salt River above the Lake (see Salt River monitoring) to show that most impairment due to the fire was temporary and therefore not subject to listing. Roosevelt Lake will remain on the Planning List for more monitoring to determine whether there are any residual impacts due to the fire. Note that no turbidity samples were taken following the fire.**
			Lead (total) µg/L	**15 (FBC, DWS)**	**<10 - 35**	**1 of 2**	**Not assessed**	
			Manganese (total) µg/L	**98 (DWS)**	**84 - 1680**	**1 of 2**	**Not assessed**	
			Nitrogen (total) mg/L	**1.00 (A&Ww)**	**0.58 - 5.31**	**1 of 2**	**Not assessed**	
			Phosphorus (total) mg/L	**0.6 (A&Ww)**	**0.10 - 1.67**	**1 of 2**	**Not assessed**	
Saguaro Lake AZL15060106A-1290 A&Wc, FC, FBC, DWS, AgI, AgL	Univ. of Az. Reservoir Study SRSAG - A	1999 - 4 partial suites 2000 - 8 partial suites	No exceedances					Some nitrogen and phosphorus samples were obtained, but were not composite samples at 1, 2 & 5 meters depth as required for nutrient standards for this lake (R18-11-109.G Footnote 6). Therefore, these nutrient samples were not considered in the final assessment and do not count as core parameter samples.
	Univ. of Az. Reservoir Study SRSAG - B	1999 - 4 partial suites 2000 - 8 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.3 - 10.5	1 of 4		
			pH (high) SU	6.5 - 9.0 (A&Wc, FBC, DWS, AgI, AgL)	7.9 - 9.3	2 of 12		
	Univ. of Az. Reservoir Study SRSAG - C	1999 - 4 field 2000 - 8 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.2 - 11.2	2 of 5		
	AGFD Urban Lakes Study SRSAG - A	2002 - 2 partial suites	No exceedances					
	AGFD Urban Lakes Study SRSAG - B	2002 - 2 partial suites	No exceedances					
	AGFD Routine Monitoring SRSAG - UL (up lake)	1998 - 1 field	No exceedances					
	AGFD Routine Monitoring SRSAG - S1	2001 - 5 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	3.4 - 9.3	1 of 5		
	AGFD Routine Monitoring SRSAG - S2	2001 - 5 partial suites	No exceedances					
	AGFD Routine Monitoring SRSAG - S3	2001 - 5 partial suites	No exceedances					
	AGFD Routine Monitoring SRSAG - A (dam site)	1998 - 1 field 1999 - 10 partial suites	No exceedances					

TABLE 15. SALT WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	AGFD Routine Monitoring SRSAG (Perrigrin Cove)	1998 - 1 field 1999 - 10 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc	6.2 - 10 (76 - 110%)	1 of 10		Low dissolved oxygen attributed to natural lake turnover of the water column in October 1999, a naturally-occurring condition. Not used in the final assessment.
	AGFD Routine Monitoring SRSAG - MF (below Mormon Flat Dam)	1998 - 1 field 1999 - 1 partial suite 2001 - 1 partial suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6 - 8 (70 - 103%)	2 of 3		
			pH (high) SU	6.5 - 9.0 (A&Wc, FBC, DWS, Agl, AgL)	8.0 - 9.6	1 of 3		
	AGFD Routine Monitoring Above Bagley Flats SRSAG	1999 - 7 partial suites 2001 - 3 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.1 - 9.9 (73 - 107%)	1 of 11		
	ADEQ Lakes Program SRSAG-BJ 100081	1999 - 1 partial suite 2001 - 4 partial suites 2002 - 1 VOC	Dissolved Oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.0 - 13.5	1 of 4		
			Fluoride (total) µg/L	4000 (DWS)	200 - 15800	1 of 4		
			pH (high) SU	6.5 - 9.0 (A&Wc, FBC, DWS, Agl, AgL)	7.5 - 9.4	2 of 4		
	ADEQ Lakes Program SRSAG-A 100082	1999 - 1 partial suite 2000 - 1 partial suite 2001 - 2 partial suites 2002 - 2 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.6 - 11.4	1 of 6		Low dissolved oxygen attributed to natural lake turnover of the water column in October, a naturally-occurring condition. Not used in the final assessment.
	ADEQ Lakes Program At Marina SRSAG-MAR1 100994	2000 - 1 VOC 2001 - 1 Field + 2 VOC	No exceedances					
	ADEQ Lakes Program SRSAG-MAR2 100995	1999 - 1 field 2000 - 1 VOCs	No exceedances					
	ADEQ Lakes Program SRSAG-BAG 101001	1999 - 1 partial suite	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining Agl Attaining AgL Attaining	**1998 - 2002** 101 samples 37 sampling events	**Dissolved oxygen** mg/L	> 7.0 (90% saturation) (A&Wc)	3.4 - 13.5	10 of 82	Attaining	**ADEQ & AGFD collected a total of 101 samples from 18 sites in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: *Escherichia coli*, total nitrogen, and total phosphorus.**
			Fluoride (total) µg/L	4000 (DWS)	200 - 15800	1 of 16	Attaining	
			pH (high) SU	6.5 - 9.0 (A&Wc, FBC, DWS, Agl, AgL)	7.5 - 9.6	5 of 101	Attaining	

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
SALT WATERSHED -- STREAM ASSESSMENTS				
Bear Wallow Creek North and South Forks - Black River 6 miles AZ15060101-023 Unique Water	A&Wc Inconclusive FC Attaining FBC Inconclusive AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to missing core parameters: *Escherichia coli* and dissolved copper.		
Bear Wallow Creek, North Fork headwaters - Bear Wallow Creek 5 miles AZ15060101-022 Unique Water	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (copper and zinc), and total metals (mercury, copper, and lead).		
Bear Wallow Creek, South Fork headwaters - Bear Wallow Creek 4 miles AZ15060101-258	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 2 samples).		
Beaver Creek headwaters - Black River 13 miles AZ15060101-008	A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to: 1. Missing core parameter: dissolved copper. 2. Exceedance of the former turbidity standard (2 of 8 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	TURB/SSC	
Black River Beaver Creek - Reservation Creek 11 miles AZ15060101-007	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to missing core parameters: *Escherichia coli* and dissolved copper.		
Black River, East Fork headwaters - Black River 12 miles AZ15060101-009	A&Wc Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to missing core parameter: dissolved copper.		
Black River, West Fork headwaters - Black River East Fork 15 miles AZ15060101-048	A&Wc Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to missing core parameters: dissolved metals (copper, cadmium, and zinc).		

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Bloody Tanks Wash Schultz Ranch - Miami Wash 7 miles AZ15060103-034B	A&We Inconclusive PBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List. No current monitoring data. Added in 2002 due to copper exceedance (1 of 1 sample). (Previously on the 303(d) List due to copper but delisted in 2002 due to insufficient monitoring data as required in the Impaired Waters Identification Rule.)	Delist? Double check	
Campaign Creek headwaters - Pinto Creek 17 miles AZ15060103-037	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 — Attaining All Uses			
Canyon Creek headwaters - White Mountain Apache Res. 9 miles AZ15060103-014	A&Wc Inconclusive FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to fish kill in 2002 related to the Rodeo-Chediski Fire. Further monitoring is needed to determine long-term impacts from the fire.		
Cherry Creek tributary at 35°05'09"/110°56'04" - Salt River AZ15060103-015B (Reach was split into coldwater and warmwater segments since the last assessment. No current data in 015A.)	A&Wc Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 1 — Attaining All Uses			
Christopher Creek headwaters - Tonto Creek 8 miles AZ15060105-353	A&Wc Not attaining FC Attaining FBC Impaired AgI Attaining AgL Attaining Category 5 – Impaired	On the Planning List due to former turbidity standard exceedances (9 of 54 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	Add *Escherichia coli* to the 2004 303(d) List due to exceedances in 2 of 7 sampling events (occurred in 2000). Delist turbidity. The standard was repealed in 2002. Assessed turbidity as "not attaining" and placed in category 4D. Turbidity exceedances (9 of 54 samples) indicate impairment based on the former standard. Reach will remain "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." Add turbidity/SSC to the Planning List.	EPA may also use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Coon Creek Unnamed tributary at 33°46'42"/110°54'25" - Salt River 10 miles AZ15060103-039B (Reach was split into coldwater and warmwater segments since the last assessment. No current data in 039A.)	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 — Attaining All Uses			
Cottonwood Canyon headwaters - Pinto Creek 2 mile AZ15060103-891	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 2 samples).		

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Deer Creek headwaters - Rye Creek 12 miles AZ15060105-018	A&Wc Attaining FC Attaining FBC Attaining Category 1 – Attaining All Uses			
Fish Creek headwaters - Black River 14 miles AZ15060101-032	A&Ww Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to: 1. Acute and chronic copper exceedance (1 of 1 sampling event). 2. Missing core parameters: *Escherichia coli* and dissolved metals (copper and zinc).		
Gibson Mine tributary headwaters - Pinto Creek 1 mile AZ15060103-887	A&Ww Not attaining FC Inconclusive FBC Inconclusive Category 4A — Not attaining	On the Planning List due to: 1. Phase II TMDL and follow up monitoring for the TMDL. Copper exceeded standards in 5 of 5 sampling events. 3. Low pH (1 of 4 samples). 4. Zinc exceedance (1 of 1 sampling event). 5. Missing core parameters: *Escherichia coli*, dissolved metals (cadmium and zinc), total mercury, and turbidity/SSC.	4A	Copper loading from this tributary was addressed in the Pinto Creek copper TMDL approved by EPA in 2001. ADEQ is currently conducting monitoring for a Phase II TMDL.
Gold Gulch Canyon headwaters - Pinto Creek 4 miles AZ15060103-894	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Greenback Creek headwaters - Tonto Creek 16 miles AZ15060105-005	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 — Attaining All Uses			
Haigler Creek headwaters - unnamed reach at 34°12'23.5"/111°00'11" 15 miles AZ15060105-012A (Reach was split into coldwater and warmwater segments since the last assessment. No current data in 012B.)	A&Wc Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 1 — Attaining All Uses			
Haunted Canyon headwaters - Pinto Creek 7 miles AZ15060103-879	A&Ww Attaining FC Attaining FBC Attaining Category 1 — Attaining All Uses			
Hay Creek headwaters - West Fork Black River 5 miles AZ15060101-353 Unique Water	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 2 samples).		

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Miller Springs Canyon headwaters - Pinto Creek 2 miles AZ15060103-892	A&Ww Inconclusive FBC Inconclusive FC Inconclusive Category 3 – Inconclusive	On the Planning List due to: 1. Selenium exceedances in 4 of 4 samples (some of these results may have been laboratory method providing false positives). 2. Former turbidity standard exceeded in 1 of 8 samples. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 3. Missing core parameters: *Escherichia coli*, dissolved oxygen, and total mercury.	se? data	Needs more info
Pinal Creek Jesse Lane - Salt River 6 miles AZ15060103-280D	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 – Attaining All Uses			
Pinto Creek headwaters - tributary at 33°19'27"/110°54'56" 3 miles AZ15060103-018A (Reach was split into coldwater and warmwater segments since the last assessment.)	A&Wc Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 4A – Not attaining	On the Planning List due to: 1. Copper TMDL follow up monitoring, and 2. Insufficient monitoring data to assess (only 2 samples).		Copper TMDL completed by EPA in 2001. ADEQ is collecting data to support a Phase II copper TMDL for this reach.
Pinto Creek Tributary at 33°19'27"/110°54'56" - Ripper Spring 16 miles AZ15060103-018B (Reach wes split into coldwater and warmwater segments since the last assessment.)	A&Ww Not attaining FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Attaining Category 4A -- Not attaining	On the Planning List due to: 1. Selenium exceedances in 6 of 17 samples (some of these results may have been laboratory method providing false positives). 2. Dissolved zinc (1 of 22 sampling events, occurred in 2000). 3. TMDL follow-up monitoring for copper exceedances (9 of 22 sampling events). 4. Missing core parameters: *Escherichia coli*, total boron, and total mercury.	Se data	Copper TMDL completed by EPA in 2001. ADEQ is collecting data to support a Phase II copper TMDL for this reach.
Pinto Creek Ripper Spring - Roosevelt Lake 18 miles AZ15060103-018C (Renumbered reach since last assessment because of split discussed above)	A&Ww Impaired FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 5 — Impaired		Add selenium to the 303(d) List due to chronic selenium exceedances (3 of 3 sampling events). ADEQ's samples were analyzed using different laboratory methods than BHP's samples in the above reach (see selenium comment above). OK	
Pinto Creek, West Fork headwaters - Pinto Creek 12 miles AZ15060103-066	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		Sampled as part of the Pinto Creek copper TMDL. Any loadings from this tributary would be addressed in the Pinto Creek Phase II TMDL.
Reservation Creek headwaters - Black River 3 miles AZ15060101-010	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Rye Creek headwaters - Tonto Creek 18 miles AZ15060105-014	A&Ww Attaining FC Attaining FBC Inconclusive AgL Attaining Category 2 — Attaining Some Uses	On the Planning List due to missing core parameter: *Escherichia coli*.		
Salt River Pinal Creek-Roosevelt Lake 8 miles AZ15060103-004	A&Ww Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to. 1. *Escherichia coli* exceedance (immediately after the Rodeo-Chediski Fire). 2. Total nitrogen exceedances (1 of 4 samples before the fire and 4 of 5 after the fire). 3. Potential exceedances of the suspended sediment concentration geometric mean standard occurred before the fire. Insufficient SSC samples were taken following the fire to make an assessment. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed.	Turbidity/SSC?	Despite issues applying the SSC standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added by EPA to the 2004 303(d) List due to suspended sediment concentration.
Salt River Roosevelt Lake - Apache Lake 8 miles AZ15060106A-024	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Salt River Stewart Mountain Dam - Verde River 10 miles AZ15060106A-003	A&Wc Impaired FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 5 – Impaired	On the Planning List due to *Escherichia coli* exceedances (2 of 12 sampling events, occurred in 2000)*.	Add dissolved oxygen to the 303(d) List. Low dissolved oxygen in 6 of 21 samples. OK	*Although two *Escherichia coli* exceedances, FBC was assessed as "inconclusive" rather than "impaired" for the following reasons: – One of the two *Escherichia coli* exceedances was very close to the standard (result is 240, standard is 235) and lab methods provide an estimate of bacterial density (most probable number) (see discussion in Chapter III). - The two exceedances represent a small proportion of the total number of samples on this reach (2 of 96 samples, 2 of 40 monitoring events).
Snake Creek headwaters - Black River 6 miles AZ15060101-045 Unique Water	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (copper and zinc), and total metals (mercury, copper and lead).		
Spring Creek headwaters - Tonto Creek 20 miles AZ15060105-010	A&Ww Attaining FC Attaining FBC Inconclusive AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to missing core parameter: *Escherichia coli*.		

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Stinky Creek Fort Apache Reservation - West Fork Black River AZ15060101-352A Unique Water	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, copper and lead).		
Tonto Creek headwaters - unnamed tributary at 34°18'10"/111°04'14" 8 miles AZ15060105-013A (Reach was split into coldwater and warmwater segments since the last assessment.)	A&Wc Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 4D — Not attaining	On the Planning List due to: 1. *Escherichia coli* exceedance (1 of 15 sampling events, occurred in 2000). 2. Nitrogen annual mean exceedance (in 2002). 3. Exceedances of the former turbidity standard (19 of 99 samples, or 19 of 41 samples below the USGS gage). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	Delist turbidity. The standard was repealed in 2002. Assessed turbidity as "not attaining" and placed in category 4D. Turbidity exceedances in 19 of 99 samples indicate impairment based on the former standard. Reach will remain "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired."	EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Tonto Creek unnamed tributary at 34°18'10"/111°04'14" - Haigler Creek 9 miles AZ15060105-013B (Reach was split into coldwater and warmwater segments since the last assessment.)	A&Ww Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 4D – Not attaining	On the Planning List due to: 1. Nitrogen annual mean exceedance in 2002. 2. *Escherichia coli* exceedance (2 of 7 sampling events, occurred in 2000)*. 2. Former turbidity standard exceedances (7 of 21 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	Delist turbidity. The standard was repealed in 2002. Assessed turbidity as "not attaining" and placed in category 4D. Turbidity exceedances in 19 of 99 samples indicate impairment based on the former standard. Reach will remain "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired."	*Although two Escherichia coli exceedances, FBC was assessed as "inconclusive" rather than "impaired" for the following reason: - One of the two *E. coli* exceedances was very close to the standard (result is 272, standard is 235) and bacterial lab methods provide an estimation of bacterial density (most probable number) (see discussion in Chapter III). EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Tonto Creek Rye Creek - Gun Creek 5 miles AZ15060105-008	A&Ww Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 1 — Attaining All Uses		Delist turbidity. The standard was repealed in 2002. No exceedances of the former standard in 18 samples.	
SALT WATERSHED -- LAKE ASSESSMENTS				
Apache Lake 2200 acres AZL15060106A-0070	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Inconclusive AgI Attaining AgL Attaining Category 2 — Attaining Some Uses Trophic status -- Oligotrophic	On the Planning List due to: 1. Missing core parameters: *Escherichia coli*, nitrogen, phosphorus, and total fluoride. 2. Low dissolved oxygen (7 of 45 samples).	add DO	

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Big Lake 440 acres AZL15060101-0160	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 2 — Attaining Some Uses Trophic status – Eutrophic	On the Planning List due to: 1. Missing core parameters: *Escherichia coli* and dissolved cadmium. 2. Low dissolved oxygen (1 of 4 samples).		
Canyon Lake 450 acres AZL15060106A-0250	A&Wc Impaired FC Inconclusive FBC Inconclusive DWS Inconclusive AgI Inconclusive AgL Inconclusive Category 5 — Impaired Trophic status not calculated	On the Planning List due to missing core parameters: *Escherichia coli*, total fluoride, total boron, total nitrogen, nitrate, total phosphorus, total metals (mercury, arsenic, chromium, lead, and copper), and dissolved metals (copper, cadmium, and zinc).	Add dissolved oxygen to the 303(d) List due to low dissolved oxygen in 7 of 35 samples. 3f	
Crescent Lake 150 acres AZL15060101-0420	A&Wc Impaired FC Attaining FBC Impaired AgI Impaired AgL Impaired Category 5 – Impaired Trophic status – Eutrophic	On the Planning List due to: 1. Fish kill in 1998 related to algal blooms, weed growth, and high pH may indicate a narrative nutrient standard violation. 2. Nitrogen exceedance in 1 of 9 samples. 3. Missing core parameters: *Escherichia coli*, turbidity, and dissolved metals (copper and cadmium).	EPA placed this reach on the 2002 303(d) List for high pH based on 5 of 7 exceedances. EPA's listing was based on violation of narrative water quality standards. Arizona's Impaired Waters Identification Rule requires adoption of narrative implementation procedures before the state may use narrative information in a listing decision, but once listed, the lake cannot be delisted until a TMDL is complete or dissolved oxygen data indicate that designated uses are being attained. Keep on!	
Lake Sierra Blanca 30 acres AZL15060101-1390	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed) Trophic status not calculated	On the Planning List. No current monitoring data. Added in 2002 due to a fish kill in 1998.		Fish kill in 1998 (related to weed growth and high pH) may be evidence of narrative standards violations.

TABLE 16. SALT RIVER WATERSHED — ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Roosevelt Lake 18,350 acres AZL15060103-1240	A&Ww Not attaining FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 4D — Not attaining Trophic status – Mesotrophic - Hypereutrophic	On the Planning List due to: 1. Former turbidity standard exceedances before the fire (11 of 46 samples). Causes and sources of the turbidity will be investigated during the next monitoring cycle for this watershed. 2. Missing core parameters: *Escherichia coli*, total nitrogen, and total phosphorus.		To be consistent with other assessments, this reach is assessed as "not attaining" and added to the Planning List due to turbidity for the following reasons: 1. Based on 11 of 46 samples exceeding the former turbidity standard (repealed in 2002), this reach is impaired by turbidity. 2. There is insufficient monitoring information to assess this stream based on suspended sediment concentration (new sediment standard). 3. Reaches on the 303(d) List due to turbidity impairment are being placed in Category 4D until sufficient turbidity or suspended sediment concentration data are collected to make an assessment of "attaining" or "impaired." EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Saguaro Lake 1025 acres AZL15060106A-1290	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic status -- Mesotrophic	On the Planning List due to missing core parameters: *Escherichia coli*, total nitrogen, and total phosphorus.		

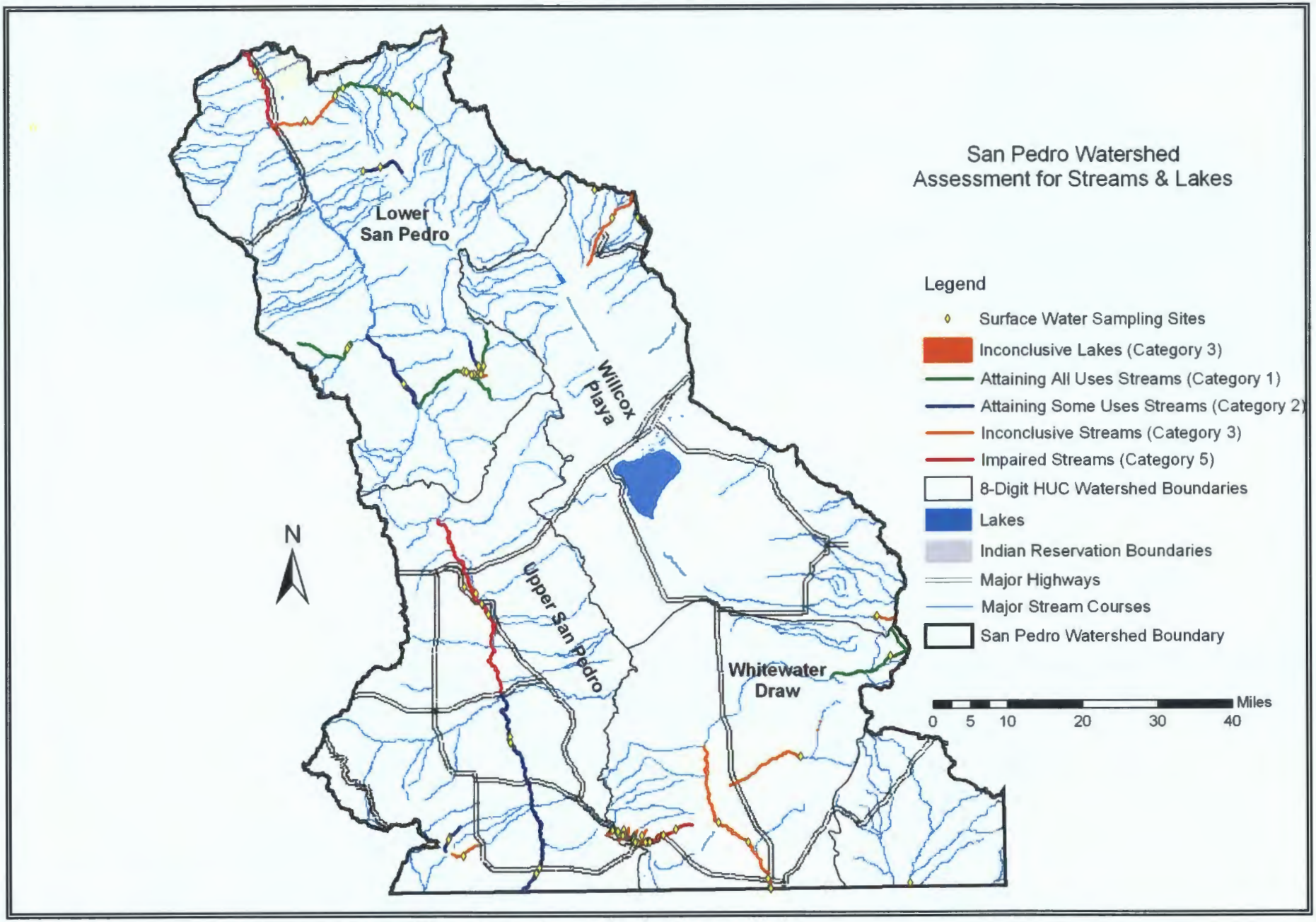

Figure 21. San Pedro - Willcox Playa - Rio Yaqui Watershed 2004 Monitoring and Assessment Map

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Aravaipa Creek Stowe Gulch - Wilderness Area AZ15050203-004B A&Ww, FC, FBC, AgL Unique Water	ADEQ Ambient Monitoring Near springs SPARA012.45 100209	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring At east trail head SPARA011.03 100210	1998 - 1 partial suite 2000 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Below Parson's Canyon SPARA010.40 100211	1998 - 1 partial suite 1999 - 1 partial suite 2000 - 1 full + 2 partial suites	No exceedances					
	ADEQ Ambient Monitoring At Hell's Half Acre (West end) SPARA007.92 100716	1999 - 1 full suite 2000 - 4 full suites 2001 - 2 full suites 2002 - 1 full suite	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1998 - 2002** **16 samples** **13 sampling events**	**No exceedances**					**ADEQ collected 16 samples at 4 sites in 1998 - 2002. Assessed as "attaining all uses."**
Aravaipa Creek Wilderness Area - San Pedro River AZ15050203-004C A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring At Woods Ranch SPARA006.75 100212	1998 - 1 full suite 2000 - 1 full suite 2002 - 1 turbidity	No exceedances					
	ADEQ Ambient Monitoring 5 miles from terminus SPARA002.96 100213	1998 - 1 partial suite	No exceedances					
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998 - 2002** **4 samples** **3 sampling events**	**No exceedances**					**ADEQ collected 4 samples at 2 sites in 1998 - 2002. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: *Escherichia coli*, dissolved oxygen, dissolved metals (cadmium, copper, and zinc), and total metals (mercury, copper, and lead).**

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Bass Canyon Creek tributary at 32°26'06"/110°13'18" - Hot Springs Canyon Creek AZ15050203-899B A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring At stream length 9.2 miles SPBAS001.54 100214	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Above Double R Canyon SPBAS000.75 100215	1999 - 1 full suite 2000 - 3 full suites	No exceedances					
	ADEQ Ambient Monitoring Above Hot Springs Canyon SPBAS000.24 100217	1998 - 1 partial suite	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1998 - 2000** **6 samples** **4 sampling events**	**No exceedances**					**ADEQ collected 6 samples at 3 sites in 1998 - 2000. Assessed as "attaining all uses."**
Bass Canyon, unnamed tributary of headwaters - Bass Canyon Creek AZ15050203-935 A&Ww, FBC, FC (tributary rule)	ADEQ Ambient Monitoring East of Bass Canyon Creek SPUBS000.20 100224	1998 - 1 suite	No exceedances					
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Brewery Gulch Wildcat Canyon - Mule Gulch AZ15080301-337 A&We, PBC	ADEQ TMDL Program Above mineralized zone RMBRG000.90	2000 - 1 field + metals	Copper (dissolved) µg/l	varies by hardness (A&We acute)	26	1 of 1		
	ADEQ TMDL Program At Mule Gulch RMBRG000.01	2000 - 4 field + metals	Copper (dissolved) µg/l	varies by hardness (A&We - acute)	60 - 150	4 of 4		
			pH SU	6.5 - 9.0 (A&We, PBC)	6 - 7.5	1 of 4		
	Summary Row **A&We Impaired** **PBC Inconclusive**	**2000** **5 samples** **4 sampling events**	**Copper (dissolved) µg/l**	**varies by hardness (A&We)**	**26 - 150**	**5 of 5 events (occurred in 2000)**	**Impaired**	**Samples were collected as part of the Mule Gulch copper TMDL. Copper and pH loadings will be addressed in the Mule Gulch TMDL.**
			pH SU	**6.5 - 9.0 (A&We, PBC)**	**6 - 7.5**	**1 of 5**	**Inconclusive**	

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Buehman Canyon headwaters - end Unique Water AZ15050203-010A A&Ww, FC, FBC, AgL Unique Water	ADEQ Ambient Monitoring 2 miles below Bullock Cyn. SPBHC002.46 100425	1999 - 1 full suite 2000 - 2 full + 1 partial suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) A&Ww	2.4 - 8.3 (31- 89%)	2 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	ADEQ Ambient Monitoring 1/4 mile below dry wash SPBHC002.17 101175	2000 - 1 full suite 2001 - 2 full suites 2002 - 1 full suite	No exceedances					
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgL Attaining	**1999 - 2002** **8 samples 8 sampling events**	**No exceedances**					**ADEQ collected 8 samples at 2 sites in 1999 - 2002. Assessed as "attaining all uses."**
C - Canyon headwaters - Mule Gulch AZ15080301-342 A&We, PBC (tributary rule)	ADEQ TMDL Program At Highway 80 RMCCN000.01	2000 - 1 field + metals	Copper (dissolved) µg/l	varies by hardness (A&We)	55	1 of 1		
	Summary Row A&We Inconclusive PBC Inconclusive	**2000** **1 sampling event**	**Copper (dissolved) µg/l**	**varies by hardness (A&We)**	**55**	**1 of 1 event (in 2000)**	**Inconclusive**	**Samples were collected as part of the Mule Gulch copper TMDL. Copper loadings will be addressed in the Mule Gulch TMDL.**
Copper Creek headwaters - Prospect Cyn. AZ15050203-022A A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Above Bluebird Mine SPCOP007.09 100433	1998 - 1 partial suite 1999 - 1 full suite 2000 - 1 full + 2 partial suites	No exceedances					
	ADEQ Ambient Monitoring Below Dark Canyon SPCOP005.80 100944	1999 - 1 full suite 2000 - 3 full suites	Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 7.1	1 of 1		Lab reporting limits for two other samples were too high to use results for assessment.
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining AgL Attaining	**1999 - 2000** **9 samples 5 sampling events**	**Selenium (total) µg/L**	**2 (A&Ww chronic)**	**<5 - 7.1**	**1 of 1 event (insufficient events)**	**Inconclusive**	**ADEQ collected 9 samples at 2 sites from 1998 - 2000. Assessed as "attaining some uses" and placed on the Planning List due to selenium exceedance.**
Double R Canyon Creek headwaters - Bass Cyn Creek AZ15050203-902 A&Ww, FC, FBC	ADEQ Ambient Monitoring SPDOU001.00 100222	1998 - 1 full suite	Dissolved oxygen mg/l	> 6.0 (90% saturation) (A&Ww)	5.7 (61%)	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	ADEQ Ambient Monitoring Near Terminus SPDOU000.20 100223	1998 - 1 full suite 2000 - 1 full suite	Dissolved oxygen mg/l	> 6.0 (90% saturation) (A&Ww)	4.7 - 6.2 (59 - 70%)	1 of 2		

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Attaining FC Attaining FBC Inconclusive	1998 - 2000 3 sampling events	No exceedances					ADEQ collected 3 samples at 2 sites from 1998 - 2000. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameter: *Escherichia coli*.
Dubacher Canyon headwaters - Mule Gulch AZ15080301-075 A&We, PBC (tributary rule)	ADEQ TMDL Program Below Highway 80 RMDBC000.01	2000 - 1 field + metals	Copper (dissolved) µg/l	Varies by hardness (A&We)	1,400	1 of 1		
			pH (low) SU	6.5-9.0 (A&We, PBC)	2.9	1 of 1		
	Summary Row A&We Inconclusive PBC Inconclusive	2000 1 sampling event	Copper (dissolved) µg/l	Varies by hardness (A&We)	1,400	1 of 1 event (insufficient events)	Inconclusive	Samples were collected as part of the Mule Gulch copper TMDL. Copper and pH loadings will be addressed in the Mule Gulch TMDL.
			pH (low) SU	6.5-9.0 (A&We, PBC)	2.9	1 of 1	Inconclusive	
Grant Creek headwaters - High Creek AZ15050201-033 A&Wc, FC, FBC, DWS, AgL	ADEQ Ambient Monitoring 1 mile below Post Creek WPGRA006.56 100561	1999 - 1 full suite 2000 - 1 partial suite	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgL Inconclusive	1999 - 2000 2 sampling events	No exceedances				Not assessed	Insufficient monitoring data to assess.
Hendricks Gulch headwaters - Mule Gulch AZ15080301-335 A&We, PBC (tributary rule)	ADEQ TMDL Program At Mule Gulch RMHNG000.01	2000 - 3 field + metals	Copper (dissolved) µg/l	Varies by hardness (A&We)	15 - 76	1 of 3		
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	5.8 - 7.4	1 of 2		
	Summary Row A&We Inconclusive PBC Inconclusive	2000 3 sampling events	Copper (dissolved) µg/l	varies by hardness (A&We)	15 - 76	1 of 3 events (insufficient events)	Inconclusive	Samples were collected as part of the Mule Gulch copper TMDL. Copper and pH loadings will be addressed in the Mule Gulch TMDL.
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	5.8 - 7.4	1 of 2	Inconclusive	
Hot Springs Canyon Creek headwaters - San Pedro River AZ15050203-013 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Below Bass Canyon Creek SPHSC006.22 100219	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Below Wildcat Canyon SPHSC006.13 100574	1999 - 1 full suite 2000 - 2 full + 2 partial suites	No exceedances					

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Ambient Monitoring Southwest of Wildcat Peak SPHSC006.04 100220	1998 - 1 partial suite	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1998 - 2000** **7 samples** **6 sampling events**	**No exceedances**					**ADEQ collected 7 samples at 3 sites in 1998-2000. Assessed as "attaining all uses."**
Leslie Canyon Creek headwaters - Whitewater Draw 15080301-007 A&Ww, FBC, FC, AgL	USGS Ambient Monitoring At Leslie Canyon National Wildlife Refuge RMLES007.02 101500	2002 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.5 (52%)	1 of 1		
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**2002** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Miller Canyon Creek headwaters - San Pedro River AZ15050202-409A A&Wc, FC, FBC, DWS, AgL	ADEQ Biocriteria Program Near headwaters SPMLC008.64 100592	1998 - 1 suite	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **DWS Inconclusive** **AgL Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Morales Creek headwaters - Mule Gulch AZ15080301-331 A&We, PBC (tributary rule)	ADEQ TMDL Program Near Mule Gulch RMMOR000.40	2000 - 1 field + metals	Copper (dissolved) µg/l	varies by hardness (A&We)	18	1 of 1		
	Summary Row **A&We Inconclusive** **PBC Inconclusive**	**2000** **1 sampling event**	**Copper (dissolved)** **µg/l**	**varies by hardness** **(A&We)**	**18**	**1 of 1 event** **(insufficient** **events)**	**Inconclusive**	**Samples were collected as part of the Mule Gulch copper TMDL. Copper and pH loadings will be addressed in the Mule Gulch TMDL.**
Mule Gulch headwaters - above Lavender Pit AZ15080301-090A A&Ww, FC, PBC	ADEQ TMDL Program Below Spring Canyon RMMLG008.16	2002 - 1 field + metals	No exceedances					
	ADEQ TMDL Program At Castle Rock (MG-2) RMMLG007.88 100506	1998 - 4 pH, copper, zinc	No exceedances					
	ADEQ TMDL Program At Castle Rock RMMLG007.86	2000 - 1 field + 2 metals	No exceedances					

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Inconclusive FC Inconclusive PBC Inconclusive	**1998 - 2000** **8 sampling events**	**No exceedances**					**ADEQ collected 8 samples at 3 sites in 1998-2000. Assessed as "Inconclusive" and placed the Planning List due to missing core parameters: *Escherichia coli*, dissolved oxygen, turbidity/SSC, and total mercury.**
Mule Gulch above Lavender Pit - Bisbee WWTP AZ15080301-090B A&We, PBC	ADEQ TMDL Program At Lavender Pit RMMLG007.62 (Mule Gulch 100)	1999 - 1 field + metals 2000 - 5 field + metals 2002 - 4 field + metals	Copper (dissolved) µg/l	Varies by hardness (A&We)	11 - 160	5 of 10		
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	5.8 - 8.7	1 of 4		
	ADEQ TMDL Program Above mill site RMMLG007.20	1999 - 1 pH + metals	Copper (dissolved) up/l	Varies by hardness (A&We)	4,200	1 of 1		
				1300 (PBC total)	4,200	1 of 1		Dissolved copper data were compared to the total copper standards.
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	3.1	1 of 1		
	ADEQ TMDL Program Below old mill site RMMLG007.19 (Mule Gulch 150)	2000 - 2 pH + metals	Copper (dissolved) up/l	Varies by hardness (A&We)	420 - 40,000	4 of 4		
				1300 (PBC total)	420 - 40,000	3 of 4		Dissolved copper data were compared to the total copper standards.
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	3 - 5.9	1 of 2		
	ADEQ TMDL Program At traffic circle RMMLG007.16 100507	1998 - 3 pH + metals	Copper (dissolved) µg/l	Varies by hardness (A&We)	1762-10,050	3 of 3		
				1300 (PBC total)	2356 - 10050	3 of 3		Dissolved copper data were compared to the total copper standards.
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	3.4 - 5.8	3 of 3		
			Zinc (dissolved) µg/l	Varies by hardness (A&We)	2,040-3,760	2 of 3		
	ADEQ TMDL Program Above C-Canyon RMMLG006.99	1999 - 1 pH + metals	Copper (dissolved) µg/L	Varies by hardness (A&We)	12,000	1 of 1		
				1300 (PBC - total)	12,000	1 of 1		Dissolved copper data were compared to the total copper standards.
			Lead (dissolved) µg/L	15 (PBC- total)	35	1 of 1		Dissolve lead data were compared to the total lead standards.
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	3.2	1 of 1		

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&We Impaired PBC Impaired	1998 - 2002 17 samples 10 sampling events	Copper (dissolved) µg/L	varies by hardness (A&We)	11 - 40,000	5 of 10 events (in 1998-2002)	Impaired	ADEQ collected 17 samples at 5 sites in 1998-2002. Assessed as "impaired" due to copper and pH exceedances. *EPA placed pH on the list based on 7 exceedances in 15 samples. Arizona's Impaired Waters Identification Rule requires at least 20 samples to base a listing decision for pH; however, once listed a parameter cannot be delisted until a TMDL is complete or data indicate designated uses are being "attained". Zinc is now supporting uses. A TMDL for metals and low pH is currently being prepared for Mule Gulch and contributing tributaries. Also placed on the Planning List due to dissolved lead exceedance.
				1300 (PBC - total)	11 - 40,000	8 of 9	Inconclusive	
			Lead (dissolved) µg/L	15 (PBC- total)	35	1 of 2	Inconclusive	
			pH (low) SU	6.5 - 9.0 (A&We, PBC, AgL)	3.2	7 of 11	Inconclusive (Impaired*)	
			Zinc (dissolved) µg/l	Varies by hardness (A&We)	2,040 - 3,760	2 of 19 events (Did not exceed last 3 years)	Attaining	
Mule Gulch Bisbee WWTP - Highway 80 bridge AZ15080301-090C A&Wedw, PBC	ADEQ TMDL Program Below WWTP (Site 4) RMMLG006.38 100508	1998 - 4 pH + metals	Copper (dissolved) µg/L	varies by hardness (A&Wedw chronic)	<15 - 30	2 of 4		
				varies by hardness (A&Wedw acute)	<15 - 30	1 of 4		
	ADEQ TMDL Program At MG-200 (new site) RMMLG006.24	2000 - 3 field + metals 2002 - 2 field + metals	Copper (dissolved) µg/l	Varies by hardness (A&Wedw chronic)	<10 - 9400	5 of 5		
				Varies by hardness (A&Wedw acute)	<10 - 9400	5 of 5		
				1300 (PBC - total)	55 - 9400	2 of 4		Dissolved copper data were compared to the total copper standard.
			Cadmium (dissolved) µg/L	varies by hardness (A&Wedw chronic)	<1 - 18	3 of 4		
			Lead (dissolved) µg/L	varies by hardness (A&Wedw chronic)	<5 - 71	1 of 3		
				15 (PBC - total)	<5 - 71	1 of 3		Dissolved lead data were compared to the total lead standard.
			pH SU	6.5 - 9.0 (A&Wedw, PBC)	3.1 - 8.2	2 of 4		
			Zinc (dissolved) µg/l	varies by hardness (A&Wedw)	110 - 4,300	3 of 5		

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ TMDL Program At MG-200 (old site) RMMLG006.09	1999 - 1 field + metals 2000 - 2 field + metals	Cadmium (dissolved) µg/L	varies by hardness (A&Wedw chronic)	<1 - 16	3 of 3		
				varies by hardness (A&Wedw acute)	<1 - 16	1 of 3		
			Copper (dissolved) µp/l	varies by hardness (A&Wedw chronic)	10 - 7,300	3 of 3		
				varies by hardness (A&Wedw acute)	10 - 7,300	3 of 3		
				1300 (PBC)	<10 - 7300	1 of 3		Dissolved copper data were compared to the total copper standard.
			pH (low) SU	6.5 - 9.0 (A&Wedw, PBC)	4.2 - 8.1	1 of 2		
			Zinc (dissolved) µg/l	Varies by hardness (A&Wedw)	50 - 1,100	2 of 3		
	ADEQ TMDL Program Site MG6 RMMLG006.03 100509	1998 - 3 field + metals	Copper (dissolved) µg/l	Varies by hardness (A&Wedw acute)	43-85	3 of 3		
				varies by hardness (A&Wedw chronic)	43 - 85	3 of 3		
	ADEQ TMDL Program At MG-300 (MG-1) At 1" Elfrida cutoff RMMLG004.65	1998 - 2 field + metals 1999 - 1 field + metals 2000 - 4 field + metals 2002 - 1 field + metals	Copper (dissolved) up/l	varies by hardness (A&Wedw chronic)	44 - 12,000	7 of 8		
				varies by hardness ('A&Wedw acute)	44 - 12,000	6 of 8		
				1300 (PBC - total)	44 - 12,000	2 of 8		Dissolved copper data were compared to the total copper standards.
			Cadmium (dissolved) µg/L	varies by hardness (A&Wedw chronic)	1.2 - 34	5 of 7		
				varies by hardness (A&Wedw acute)	1.2 - 34	3 of 7		
			Lead (dissolved) µg/L	varies by hardness (A&Wedw chronic)	<5 - 59	2 of 4		
				15 (PBC - total)	<5 - 59	2 of 4		Dissolved lead data were compared to the total lead standard.
			Zinc (dissolved) µg/l	Varies by hardness (A&Wedw)	<50 - 2,200	3 of 9		
			pH (low) SU	6.5-9.0 (A&Wedw, PBC)	3.16 - 8.58	2 of 10		

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ TMDL Program At 2nd Elfrida cutoff RMMLG003.40	1998 - 1 field + metals	Copper (dissolved) µg/l	varies by hardness A&Wedw acute	5,500	1 of 1		
				varies by hardness A&Wedw chronic	5,500	1 of 1		
				1300 (PBC - total)	5,500	1 of 1		Dissolved copper data were compared to the total copper standards.
			Cadmium (dissolved) µg/L	varies by hardness (A&Wedw chronic)	10	1 of 1		
			Zinc (dissolved) µg/l	Varies by hardness (A&Wedw)	940	1 of 1		
	Summary Row A&Wedw impaired PBC impaired	1998-2002 24 samples 12 sampling events	Copper (dissolved) up/l	varies by hardness (A&Wedw acute)	<10 - 9400	12 of 12 events (in 1998-2002)	Impaired	ADEQ collected 24 samples at 6 sites in 1998 - 2002. Assessed as "impaired" due to copper, cadmium, and zinc exceedances and low pH. A TMDL for metals and low pH is currently being prepared for Mule Gulch and contributing tributaries. Also placed on the Planning List due to lead exceedance and missing core parameters: dissolved oxygen, *Escherichia coli*, and turbidity/SSC.
				varies by hardness (A&Wedw chronic)	<10 - 9400	12 of 12 events (100% exceed)	Impaired	
				1300 (PBC - total)	55 - 9400	6 of 21	Impaired	
			Cadmium (dissolved) µg/L	varies by hardness (A&Wedw acute)	<1 - 18	3 of 8 events (in 1998-2000)	Impaired	
				varies by hardness (A&Wedw chronic)	<1 - 18	6 of 8 events (> 3 exceed)	Impaired	
			Lead (dissolved) µg/L	varies by hardness (A&Wedw chronic)	<5 - 71	1 of 6 events (17% exceed)	Inconclusive	
				15 (PBC - total)	<5 - 71	1 of 5	Inconclusive	
			pH SU	6.5 - 9.0 (A&Wedw, PBC)	3.1 - 8.2	5 of 23	Impaired	
			Zinc (dissolved) µg/l	varies by hardness (A&Wedw acute)	110 - 4,300	5 of 12 events (in 1998 - 2002)	Impaired	
				varies by hardness (A&Wedw chronic)	110 - 4,300	5 of 12 events (42% exceed)	Impaired	
Mural & Grassy Hill Tributary headwaters - Mule Gulch AZ15080301-344 A&We, PBC (tributary rule)	ADEQ TMDL Program At Mule Gulch RMMHC000.01	2000 - 1 field + metals	Copper (dissolved) µg/l	varies by hardness (A&We)	15	1 of 1		
	Summary Row A&We Inconclusive PBC Inconclusive	2000 1 sampling event	Copper (dissolved) µg/l	varies by hardness (A&We)	15	1 of 1 event (in 2000)	Inconclusive	Samples were collected as part of the Mule Gulch copper TMDL. Copper loadings will be addressed in the Mule Gulch TMDL.

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
OK and Youngblood tributaries headwaters - Brewery Gulch AZ15050202-.999 A&We, PBC (tributary rule)	ADEQ TMDL Program On "B" Hill	2000 - 1 field + metals	Copper (dissolved) µg/L	varies by hardness (A&We)	180	1 of 1		
	Summary Row **A&We Inconclusive** **PBC Inconclusive**	**2000** **1 sampling event**	**Copper (dissolved) µg/L**	**varies by hardness (A&We)**	**180**	**1 of 1 event (in 2000)**	**Inconclusive**	**Samples were collected as part of the Mule Gulch copper TMDL. Copper loadings will be addressed in the Mule Gulch TMDL.**
Ramsey Canyon Creek headwaters - Forest Rd. 110 AZ15050202-404A A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Above Nature Conservancy SPRMC007.43 100625	1998 - 1 partial suite 2000 - 1 full suite 2001 - 1 full suite	No exceedances					
	ADEQ Ambient Monitoring At Box Canyon SPRMC007.18 101060	2000 - 1 full + 1 partial suites	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**1998 - 2001** **5 samples** **5 sampling events**	**No exceedances**					**ADEQ collected 5 samples at 2 sites in 1998 - 2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameter: dissolved zinc.**
Rucker Canyon Creek headwaters - Whitewater Draw AZ15080301-288 A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring Above upper-most campsite RMRUC005.63 100938	1999 - 1 full suite 2000 - 3 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.4 - 7.9 (77 - 95%)	1 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	Summary Row **A&Wc Attaining** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1999 - 2000** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 1999-2000. Assessed as "attaining all uses."**

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
San Pedro River Mexico border - Charleston AZ15050202-008 A&Ww, FC, FBC, AgI, AgL	USGS Ambient Monitoring At Palominas (transect site) 100485	2001 - 1 pH, fluoride	No exceedances					
	ADEQ & USGS Fixed Station Near Palominas SPSPR113.55 100275	1998 - 3 full suites 1999 - 2 full + 1 partial suites 2000 - 3 full suites + 7 partial suites 2001 - 4 full suites + 14 partial suites 2002 - 1 full suites + 9 partial suites	Arsenic (total) µg/L	50 (FBC)	<10 - 86	1 of 16		
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 23	2 of 16		
				varies by hardness (A&Ww acute)	<10 - 23	1 of 16		
			Copper (total) µg/L	500 (AgL)	<10 - 1200	1 of 16		
			Dissolved oxygen mg/l	> 6.0 (90% saturation) (A&Ww)	4.1 - 9.5 (50 - 94%)	2 of 16		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Escherichia coli CFU	235 (FBC)	0 - 493	1 of 16		
			Lead (total) µg/L	15 (FBC)	<5 - 230	1 of 16		
				100 (AgL)	<5 - 230	1 of 16		
			Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 5	1 of 1		Lab reporting limits for 15 other selenium samples were too high to use results for assessment.
			Turbidity NTU	50 (A&Ww)	1 - >1000	2 of 16		
	USGS & ADEQ Fixed Station #09471000 At Charleston SPSPR096.49 100291	1998 - 12 partial suites 1999 - 8 partial suites 2000 - 10 partial suites 2001 - 11 partial suites 2002 - 9 partial suites	Dissolved oxygen mg/l	> 6.0 (A&Ww)	5.6 - 9.9	3 of 50		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Suspended sediment concentration mg/L	80 (geometric mean) (A&Ww)	1 - 1250	see comment below		

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998 - 2002 95 samples 51 sampling events	Arsenic (total) µg/L	50 (FBC)	<10 - 86	1 of 16	Attaining	USGS and ADEQ collected 95 samples at 3 sites in 1998 - 2002. Assessed as "inconclusive" and placed on the Planning List due to: 1. Copper exceedances, 2. Selenium exceedances, and 3. Potential exceedances of the suspended sediment concentration (SSC) geometric mean standard.
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 23	2 of 16 events (less than 10%)	Attaining	
				varies by hardness (A&Ww acute)	<10 - 23	1 of 16 events (in 2001)	Inconclusive	
			Copper (total) µg/L	500 (AgL)	<10 - 1200	1 of 16	Attaining	
			Escherichia coli CFU	235 (FBC)	0 - 493	1 of 16 events (in 1999)	Attaining	
			Lead (total) µg/L	15 (FBC)	<5 - 230	1 of 16	Attaining	
				100 (AgL)	<5 - 230	1 of 16	Attaining	
			Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 5	1 of 1 event	Inconclusive	
			Turbidity NTU	50 (A&Ww)	1 - >1000	2 of 16	Attaining	
			Suspended sediment concentration mg/L	80 (geo mean) (A&Ww)	1 - 1250	see comment above right	Inconclusive	
San Pedro River Charleston - Walnut Gulch AZ15050202-006 A&Ww, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Below Graveyard Gulch SPSPR095.71 100653	1999 - 1 full suite 2000 - 2 full + 1 partial suite	Turbidity NTU	50 (A&Ww)	2 - 258	1 of 4		
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	2000 4 sampling events	Turbidity NTU	50 (A&Ww)	1 - 258	1 of 4	Inconclusive (see comment)	ADEQ collected 4 samples in 2000. Assessed as "attaining some uses" and placed on the Planning List due to exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
San Pedro River Babocomari - Dragoon Wash AZ15050202-003 A&Ww, FC, FBC, AgI, AgL	Hargis & Associates CERCLA Monitoring Above Apache Nitrogen (Apache Site 12) SPSPR079.20	1998 - 2 nitrate 1999 - 3 nitrate	No exceedances					Monitoring is upstream of a Superfund site with nitrate contamination problems.

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Ambient Monitoring 0.8 miles south of Hwy 80 SPSPR077.66 100281	1999 - 1 full suite 2000 - 2 full + 1 partial suites	*Escherichia coli* CFU/100 ml	235 (FBC)	39 - 660	2 of 4		
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Impaired** **Agl Attaining** **AgL Attaining**	**1998 - 2001** **9 sampling events**	***Escherichia coli*** **CFU/100 ml**	**235** **(FBC)**	**39-660**	**2 of 4 events** **(in 2000)**	**Impaired**	**ADEQ collected 4 samples and Hargis & Associates collected 5 samples at separate sites in 1998 - 2000. Assessed as "impaired" due to *Escherichia coli* exceedances.**
San Pedro River Dragoon Wash - Tres Alamos AZ15050202-002 A&Ww, FC, FBC, Agl, AgL	Hargis & Associates CERCLA Monitoring At Apache Nitrogen Products (Apache Site 3) SPSPR078.69	1998 - 2 nitrate 1999 - 2 nitrate 2000 - 4 nitrate 2001 - 5 nitrate	Nitrate (as N) mg/L	10 (A&Ww) (site specific standard)	1.6 - 37	4 of 13		Monitoring is downstream of a Superfund site with nitrate contamination problems.
	Hargis & Associates CERCLA Monitoring At Apache Nitrogen Products (Apache Site 4) SPSPR077.76	2001 - 1 nitrate	Nitrate (as N) mg/L	10 (A&Ww) (site specific standard)	35	1 of 1		
	Hargis & Associates CERCLA Monitoring At Apache Nitrogen Products Survey from Site 12 to Site 13 SPSPR078	2001 - 80 sites (1 sample each site) nitrate samples	Nitrate (as N) mg/L	10 (A&Ww) (site specific standard)	<1 - 52	28 of 80 sites exceeded		
	Hargis & Associates CERCLA Monitoring (Apache Site 13) SPSPR076.12	1998 - 3 nitrate 1999 - 2 nitrate 2000 - 4 nitrate 2001 - 5 nitrate	Nitrate (as N) mg/L	10 (A&Ww) (site specific standard)	0.74 - 28	4 of 14		
	Summary Row **A&Ww Impaired** **FC Inconclusive** **FBC Inconclusive** **Agl Inconclusive** **AgL Inconclusive**	**1998 - 2002** **108 samples** **15 sampling events**	**Nitrate (as N)** **mg/l**	**10** **(A&Ww)**	**0.43 - 22.6**	**9 of 28** **(excluding survey)** **35 of 108** **(including survey)**	**Impaired**	**Hargis and Associates collected 108 samples at 83 sites in 1998 - 2001 to monitor the effectiveness of cleanup projects at Apache Nitrogen Products. Assessed as "impaired" due to nitrate and placed on the Planning List due to missing all core parameters.**
San Pedro River Hot Springs Cr - Redfield Cyn AZ15050203-011 A&Ww, FC, FBC, Agl, AgL	ADEQ Ambient Monitoring At Cascabel SPSPR046.96 100289	1999 - 1 full suite 2000 - 4 full suites 2001 - 1 full suite 2002 - 2 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.8 - 10.1 (75 - 113%)	1 of 8		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
			Escherichia coli CFU/100 ml	235 (FBC)	<1 - 16,000	1 of 7		Flood conditions present.
			Turbidity NTU	50 (A&Ww)	2 - >1000	1 of 8		Flood conditions present.

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1999 - 2002 8 samples 8 sampling events	*Escherichia coli* CFU/100 ml	235 (FBC)	<1 - 16,000	1 of 7 events (in 2000)	Inconclusive	ADEQ collected 8 samples in 1999 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to exceedances of *Escherichia coli* and the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
			Turbidity NTU	50 (A&Ww)	2 - >1000	1 of 8	Inconclusive (see comment)	
San Pedro River Aravaipa Creek - Gila River AZ15050203-001 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Below Eskiminzin Wash SPSPR003.74 100726	1998 - 1 partial suite 1999 - 1 full suite 2000 - 5 full suites 2001 - 2 full suites 2002 - 1 full suite	Arsenic (total) µg/L	50 (FBC)	<10 - 63	1 of 9		
			Escherichia coli CFU/100 ml	235 (FBC)	2 - 2636	2 of 9		
			Lead (total) µg/L	15 (FBC)	<5 - 140	1 of 9		
			Mercury (total) µg/L	0.01 (A&Ww chronic)	<0.5 - 0.67	1 of 1		Lab reporting limits for 8 other mercury samples were too high to use results for assessment.
			Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 11	2 of 2		Lab reporting limits for 7 other selenium samples were too high to use results for assessment.
			Turbidity NTU	50 (A&Ww)	2 - >1000	1 of 10		
	ADEQ Ambient Monitoring Upstream of Roach Wash SPSPR002.88 101348	2002 - 2 full + 1 turbidity	No exceedances					
	Summary Row A&Ww Inconclusive FC Attaining FBC Impaired AgL Attaining	1998 - 2002 13 samples 10 sampling events	Arsenic (total) µg/L	50 (FBC)	<10 - 63	1 of 11	Attaining	ADEQ collected 13 samples at 2 sites in 1998 - 2000. Assessed as "impaired" due to *Escherichia coli* exceedances. Placed on the Planning List due to mercury and selenium exceedances.
			Escherichia coli CFU/100 ml	235 (FBC)	2 - 2636	2 of 11 events (in 2000 and 2001)	Impaired	
			Lead (total) µg/L	15 (FBC)	<5 - 140	1 of 11	Attaining	
			Mercury (dissolved) µg/L	0.01 (A&Ww chronic)	<0.5 - 0.67	1 of 1 event (insufficient events)	Inconclusive	
			Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 11	2 of 2 events (insufficient events)	Inconclusive	
			Turbidity NTU	50 (A&Ww)	2 - >1000	1 of 13	Attaining	

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Spring Canyon Creek headwaters - Mule Gulch AZ15080301-333 A&We, PBC (tributary rule)	ADEQ TMDL Program At confluence with Mule Gulch RMSPC000.10	2000 - 1 field + metals	No exceedances					
	Summary Row **A&We Inconclusive** **PBC Inconclusive**	**2000** **1 sampling event**	**No exceedances**				**Not assessed**	**Samples were collected as part of the Mule Gulch copper TMDL. Any copper or pH loadings would be addressed in the Mule Gulch TMDL.**
Ward Canyon Creek headwaters - Turkey Creek AZ15050201-433 A&Wc, FC, FBC, AgL	ADEQ Biocriteria Program Above Salisbury Canyon WPWRC000.31 100682	1998 - 1 partial suite	No exceedances					Missing core parameters: *Escherichia coli*, dissolved zinc, total mercury, copper, and lead.
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Whitewater Draw Gadwell Canyon - reach 15080301-003 AZ15080301-004 A&We, PBC, AgL	ADEQ TMDL Program At Double Adobe RMWHD010.02	2000 - 1 partial suite	No exceedances					Missing core parameter: field pH.
	ADEQ TMDL Program At Kings Highway RMWHD006.60 100229	1998 - 1 field + metals	Lead (total) µg/l	15 (FBC)	116	1 of 1		Missing core parameter: dissolved cadmium
				100 (AgL)	116	1 of 1		
	Summary Row **A&We Inconclusive** **PBC Inconclusive** **AgL Inconclusive**	**1998 - 2000** **2 sampling events**	**Lead (total) µg/l**	**15 (FBC)**	**116**	**1 of 1**	**Inconclusive**	**Insufficient monitoring data to assess.** **Placed on the Planning List due to lead exceedance.**
				100 (AgL)	**116**	**1 of 1**	**Inconclusive**	
Whitewater Draw reach 15080301-003 to unnamed tributary at 31°20'36"/109°34'46" AZ15080301-002A A&We, PBC, AgL	ADEQ TMDL Program At Highway 80 (WD-1) RMWHD001.3 100510	1998 - 1 pH + metals	Lead (total) µg/L	15	68	1 of 1		Missing core parameters: dissolved cadmium
	Summary Row	**1998**	**Lead (total) µg/l**	**15 (FBC)**	**68**	**1 of 1**	**Inconclusive**	**Insufficient monitoring data to assess.**
	A&We Inconclusive **PBC Inconclusive** **AgL Inconclusive**	**1 sampling event**						**Placed on the Planning List due to lead exceedance.**

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Whitewater Draw Unnamed tributary at 31°20'36"/109°34'46" to Mexico border AZ15080301-002B A&Ww, FBC, FC AgL	ADEQ TMDL Program Site WD-1A RMWHD0.012 100512	1998 - 4 pH + metals	Lead (total) µg/L	15	84	1 of 4		
	ADEQ TMDL Program At International Border RMWHD0.011 101069	2000 - 1 arsenic, beryllium	No exceedances					
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Attaining	1998 - 2000 5 samples 5 sampling events	Lead (total) µg/l	15 (FBC)	84	1 of 4	Inconclusive	ADEQ collected 5 samples at 2 sites in 1998-2000. Assessed as "attaining some uses" and placed on the Planning List due to lead exceedance and missing core parameters: *Escherichia coli*, dissolved oxygen, turbidity/SSC, dissolved cadmium, and total mercury.
Winwood Canyon headwaters-Mule Gulch AZ15080301-340 A&We, PBC (tributary rule)	ADEQ TMDL Program At Mural Hill Tributary (Above mining zone) RMWMC000.66	2000 - 1 pH + metals	Copper (dissolved) µg/l	varies by hardness (A&We)	28	1 of 1		
	ADEQ TMDL Program Above Old Mill Site, (Below mineralized zone) RMWMC000.37	2000 - 1 pH + metals	pH (low) SU	6.5 - 9.0 (A&We, PBC)	6.1	1 of 1		
	Summary Row A&We Inconclusive PBC Inconclusive	2000 2 samples 1 sampling event	Copper (dissolved) µg/l	varies by hardness (A&We)	28	1 of 2 events (occurred in 2000)	Inconclusive	Samples were collected as part of the Mule Gulch copper TMDL. Copper and pH loadings will be addressed in the Mule Gulch TMDL.
			pH (low) SU	6.5 - 9.0 (A&We, PBC)	6.1	1 of 2	Inconclusive	
LAKE MONITORING DATA								
Riggs Flat Lake AZL15050201-1210 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program WPRIG-A 100074	1998 - 1 partial suite	No exceedances					Missing core parameter: *Escherichia coli*
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive	1998 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.

TABLE 17. SAN PEDRO - WILLCOX PLAYA - RIO YAQUI WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Snow Flat Lake AZL15050201-1420 A&Wc, FBC, FC, AgI, AgL	ADEQ Lakes Program WPSNO-A 100084	1998 - 1 full suite	No exceedances					Missing core parameter: *Escherichia coli*
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Twin Pond AZ15080302-0001 A&Ww, FC, FBC (tributary rule)	USGS Ambient Monitoring SPTWP-USGS 101581	2002 - 1 full suite	No exceedances					Missing core parameters: dissolved oxygen, *Escherichia coli*, and total mercury.
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**2002** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**

TABLE 18. SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED – ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED -- STREAM ASSESSMENTS				
Aravaipa Creek Stowe Gulch - Wilderness boundary 16 miles AZ15050203-004B Unique Water (previously listed as Aravaipa Canyon Creek)	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 -- Attaining All Uses			
Aravaipa Creek Wilderness boundary - San Pedro River 13 miles AZ15050203-004C (previously listed as Aravaipa Canyon Creek)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, dissolved oxygen, dissolved metals (cadmium, copper, and zinc), and total metals (mercury, arsenic, chromium, copper, and lead).		
Bass Canyon Creek tributary at 32°26'06"/110°13'18" - Hot Springs Canyon Creek 12 miles AZ15050203-899B (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 899A.)	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 -- Attaining All Uses			
Bass Canyon, unnamed tributary of headwaters - Bass Canyon Creek 1 mile AZ15050203-935	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).	do	
Brewery Gulch Wildcat Canyon - Mule Gulch 1 mile AZ15080301-337	A&We Impaired PBC Inconclusive (see note to the right)		→ tribs get listed upon completion of TMDL investigation 45 Cu	Samples collected for Mule Gulch TMDL study. Copper and pH loadings will be addressed in the Mule Gulch TMDL report. (5 of 5 copper samples and 1 of 5 pH results did not meet standards)
Buehman Canyon headwaters - end of Unique Waters 10 miles AZ15050203-010A Unique Water	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 -- Attaining All Uses	Remove beryllium from the Planning List, as the standard was revised in 2002. No exceedances based on the new standard.	OK	
C - Canyon headwaters - Mule Gulch 0.5 miles AZ15080301-342	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).	→ were too!	Samples collected for Mule Gulch TMDL study. Copper and pH loadings will be addressed in the Mule Gulch TMDL report (1 of 1 samples exceeded copper standards).

TABLE 18. SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED – ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Copper Creek headwaters - Prospect Canyon 7 miles AZ15050203-022A	A&Ww Inconclusive FC Attaining FBC Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to chronic selenium exceedance (1 of 1 sampling event).		
Double R Canyon Creek headwaters - Bass Canyon Creek 5 miles AZ15050203-902	A&Ww Attaining FC Attaining FBC Inconclusive Category 2 -- Attaining Some Uses	On the Planning List due to missing core parameter: *Escherichia coli*. Remove dissolved oxygen, as site investigation revealed that the low dissolved oxygen was naturally occurring due to ground water upwelling, and not anthropogenic causes.		
Dubacher Canyon headwaters - Mule Gulch 1 miles AZ15080301-075	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).	Delist trib	Samples collected for Mule Gulch TMDL study. Copper and pH loadings will be addressed in the Mule Gulch TMDL report (1 of 1 copper and pH samples did not meet standards).
Grant Creek headwaters - High Creek 13 miles AZ15050201-033	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 2 samples).		
Hendricks Gulch headwaters - Mule Gulch 0.5 miles AZ15080301-335	A&We Inconclusive PBC Inconclusive Category 3 -- Inconclusive		Delist trib	Samples collected for Mule Gulch TMDL study. Copper and pH loadings will be addressed in the Mule Gulch TMDL report (1 of 3 copper and 1 of 2 pH samples did not meet standards).
Hot Springs Canyon Creek headwaters - San Pedro River 26 miles AZ15050203-013	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 -- Attaining All Uses			
Leslie Canyon Creek headwaters - Whitewater Draw 25 miles AZ15080301-007	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Miller Canyon Creek headwaters - Broken Arrow Ranch Road 4 miles AZ15050202-409A	A&Wc Inconclusive FC Inconclusive FBC Inconclusive DWS Inconclusive AgL Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		

TABLE 18. SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED – ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Morales Creek headwaters - Mule Gulch 2 miles AZ15080301-331	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		Samples collected for Mule Gulch TMDL study. Copper loadings will be addressed in the Mule Gulch TMDL report (1 of 1 copper sample exceeded standards).
Mule Gulch headwaters - above Lavender Pit 4 miles AZ15080301-090A (Reach previously known as 090A was split into 2 segments -- 090A and 090B. Designated uses were also modified since the last assessment based on the ongoing TMDL investigation.)	A&Ww Inconclusive PBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, dissolved oxygen, turbidity/SSC, and total mercury. Remove lead from the Planning List (exceedance occurred in the other segment — which is now 090B).	Delist copper, pH, and zinc from the 303(d) List. TMDL investigation has shown that exceedances occur in the lower segment (now -090B).	
Mule Gulch above Lavender Pit - Bisbee WWTP 1 mile AZ15080301-090B (Reach previously known as 090A was split into 2 segments -- 090A and 090B. Designated uses were also modified since the last assessment based on the ongoing TMDL investigation.)	A&We Impaired PBC Impaired Category 5 – Impaired	On the Planning List due to dissolved lead exceedance (1 of 2 samples).	On the 303(d) List for copper since 1990. (Acute copper exceedances in 5 of 10 sampling events and total copper exceedances in 8 of 9 samples). EPA placed pH on the list based on 7 of 15 exceedances although Arizona's Impaired Waters Identification Rule requires at least 20 samples to base a listing decision for pH. However, once listed, the reach cannot be delisted until a TMDL is complete or pH data indicate designated uses are being attained. In current data, pH exceeded standards in 7 of 11 samples. Delist zinc. No exceedances in the last 3 years of sampling. Ongoing TMDL investigation has determined that site-specific standards need to be developed.	
Mule Gulch Bisbee WWTP - Highway 80 Bridge 4 miles AZ15080301-090C (Reach previously known as 090B was split into 2 segments -- now 090C and 090D. Designated uses were also modified since the last assessment based on the ongoing TMDL investigation. No current data for reach 090D.)	A&Wedw Impaired PBC Impaired Category 5 -- Impaired	On the Planning List due to: 1. Chronic lead exceedance (1 of 6 sampling events) and total lead exceedance. 2. Missing core parameters: *Escherichia coli*, turbidity/SSC, and dissolved oxygen.	On the 303(d) List (since 1990) for copper, zinc, and low pH. Acute and chronic copper exceedances in 12 of 12 sampling events and total copper exceedances in 6 of 21 samples. Low pH in 5 of 23 samples. Acute and chronic zinc exceedances in 5 of 12 sampling events. Add cadmium to the 303(d) list. Acute cadmium exceedances in 3 of 8 sampling events and chronic cadmium exceedances in 6 of 8 sampling events. Ongoing TMDL investigation has determined that site-specific standards need to be developed.	
Mural and Grassy Hill tributary headwaters - Mule Gulch 2.2 miles AZ15080301-344	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		Samples collected for Mule Gulch TMDL study. Copper and pH loadings will be addressed in the Mule Gulch TMDL report (1 of 1 copper samples exceeded standards).

TABLE 18. SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED – ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
OK and Youngblood headwaters - Brewery Gulch 1 mile AZ15080301-1000	A&We Inconclusive PBC Inconclusive Category 3 — Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		Samples collected for Mule Gulch TMDL study. Copper and pH loadings will be addressed in the Mule Gulch TMDL report (1 of 1 copper samples exceeded standards.)
Ramsey Canyon Creek headwaters - Forest Rd. 110 4 miles AZ15050202-404A (Reach was split into warmwater and coldwater segments since the last assessment. No current data in 404B.)	A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to missing core parameter: dissolved zinc.		
Rucker Canyon Creek headwaters - Whitewater Draw 10 miles AZ15080301-288	A&Wc Attaining FC Attaining FBC Attaining AgL Attaining Category 1 -- Attaining All Uses			
San Pedro River Mexico border - Charleston 28 miles AZ15050202-008	A&Ww Inconclusive FC Inconclusive FBC Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to: 1. Chronic selenium exceedance (1 of 1 sampling event). 2. Acute copper exceedance (1 of 16 sampling events) and chronic copper exceedances (2 of 16 sampling events). 3. Potential exceedances of the suspended sediment concentration geometric mean standard. Turbidity and SSC monitoring will be scheduled during the next monitoring cycle for this watershed. Remove beryllium from the Planning List. Standard revised in 2002. No exceedances of the new standard.		Despite issues applying the suspended sediment concentration standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added to the 2004 303(d) List by EPA.
San Pedro River Charleston - Walnut Gulch 9 miles AZ15050202-006	A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to exceedance of the former turbidity standard (1 of 4 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
San Pedro River Babocomari Creek - Dragoon Wash 17 miles AZ15050202-003	A&Ww Attaining FC Attaining FBC Impaired AgI Attaining AgL Attaining Category 5 -- Impaired	Remove turbidity from the Planning List. No exceedances in 4 samples.	Add *Escherichia coli* to the 303(d) List due to exceedances in 2 of 4 sampling events (occurred in 2000).	
San Pedro River Dragoon Wash - Tres Alamos Wash 16 miles AZ15050202-002	A&Ww Impaired FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 5 -- Impaired	On the Planning List due to missing all core parameters. Added in 2002 due to exceedances of the former fecal coliform and turbidity standards. No current *Escherichia coli*, turbidity or SSC data. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	On the 303(d) List (since 1990) for nitrate. Currently, 35 of 108 samples exceeded nitrate standards. Nitrate sampling was conducted to determine the effectiveness of Superfund mitigation efforts. Contaminated ground water is seeping into the San Pedro near the Apache Nitrogen Products site.	

TABLE 18. SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED – ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
San Pedro River Hot Springs Creek - Redfield Canyon 13 miles AZ15050203-011	A&Ww Inconclusive FC Attaining FBC Inconclusive AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to: 1. *Escherichia coli* exceedance (1 of 7 sampling events, occurred in 2000). 2. Former turbidity standard exceedance (1 of 8 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.		
San Pedro River Aravaipa Creek - Gila River 15 miles AZ15050203-001	A&Ww Inconclusive FC Attaining FBC Impaired AgL Attaining Category 5 – Impaired	On the Planning List due to: 1. Chronic mercury exceedance (1 of 1 sampling event). 2. Chronic selenium exceedance (2 of 2 sampling events). Remove turbidity from the Planning List. One exceedance in 13 samples indicates support of designated uses.	Add *Escherichia coli* to the 303(d) List due to exceedances in 2 of 11 sampling events (occurred in 2000 and 2001). add Se	
Spring Canyon Creek headwaters - Mule Gulch 1 mile AZ15080301-333	A&We Inconclusive PBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		Samples collected for Mule Gulch TMDL study. Copper or pH loadings will be addressed in the Mule Gulch TMDL report. (No exceedances reported in 1 sample.)
Ward Canyon Creek headwaters - Turkey Creek 3 miles AZ15050201-433	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Whitewater Draw Gadwell Canyon - unnamed tributary 15080301-003 22 miles AZ15080301-004 (Designated uses and reach delineations have changed on this stream since the last assessment.)	A&We Inconclusive PBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (only 2 samples). 2. Lead exceedance (1 of 1 sample).		
Whitewater Draw unnamed tributary 15080301-003 to unnamed tributary at 31°20'36"/109°34'46" 6 miles AZ15080301-002A (Designated uses and reach delineations have changed on this stream since the last assessment.)	A&We Inconclusive PBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to: 1. Insufficient monitoring data to assess (only 1 sample). 2. Added in 2002 due to: lead, zinc, manganese, beryllium, and turbidity exceedances, low dissolved oxygen and missing core parameters. Remove manganese and beryllium from the Planning List due to revised standards adopted in 2002. The old beryllium and manganese data do not exceed the new standards. Remove dissolved oxygen and turbidity from the Planning List as these standards do not apply in an ephemeral water. (Change in designated uses.)	Zn, Mn OK OK	

TABLE 18. SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED – ASSESSMENT, PLANNING LIST, AND 303(d) STATUS

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Whitewater Draw Unnamed tributary at 31°20'36"/109°34'46" to Mexico border 0.4 miles AZ15080301-002B (This reach was split into 2 segments and designated uses have changed on this stream since the last assessment.)	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to: 1. Lead exceedance (1 of 4 samples). 2. Low dissolved oxygen (no current data, added to the Planning List in 2002 after being delisted from 303(d) List) 3. Turbidity exceedances (no current data, added to the Planning List in 2002 after being delisted from the 303(d) List), 4. Missing core parameters: *Escherichia coli*, dissolved oxygen, turbidity/SSC, dissolved cadmium, and total mercury. Remove zinc, manganese, and beryllium from the Planning List. No exceedances in 5 samples. (New manganese and beryllium standards.)		
Winwood Canyon headwaters - Mule Gulch 2 mile AZ15080301-340	A&We Inconclusive PBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (2 samples).		Samples collected for Mule Gulch TMDL study. Copper and pH loadings will be addressed in the Mule Gulch TMDL report (1 of 2 copper samples exceeded standards).
SAN PEDRO-WILLCOX PLAYA-RIO YAQUI WATERSHED -- LAKE ASSESSMENTS				
Riggs Flat Lake 9 acres AZL15050201-1210	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed) Trophic status -- Eutrophic	On the Planning List due to: 1. Insufficient monitoring data to assess (only 1 sample). 2. Added in 2002 due to former turbidity standard exceedance (1 of 1 sample) and 3. Missing core parameters. Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed.		
Snow Flat Lake 1 acre AZL15050201-1420	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 3 -- Inconclusive (not assessed) Trophic status -- Mesotrophic	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Twin Pond 1 acre AZ15080302-0001	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed) Trophic status not calculated	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		

Santa Cruz Map being drafted

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Alum Gulch headwaters - 31°28'20"/110°43'51" AZ15050301-561A A&We, PBC, AgL	ADEQ TMDL Program Below Trench Camp Mine SCALG005.90	1999 - 1 partial suite	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	5.9	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	2500	1 of 1		
	ADEQ TMDL Program Below January adit, Above Humboldt Canyon SCALG005.58	1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (total) µg/L	84 (FC)	140 - 180	2 of 2		
				50 (AgL)		2 of 2		
			Copper (dissolved) µg/L	varies by hardness (A&We)	110 - 400	2 of 2		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	4.5 - 5.3	2 of 2		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	39,000 - 56,000	2 of 2		
			Zinc (total) µg/L	25,000 (AgL)	42,000 - 56,000	2 of 2		
	ADEQ TMDL Program Below Humboldt Canyon, Above Alum Falls SCALG005.30	1999 - 1 partial suite	Cadmium (total) µg/L	84 (FC)	180	1 of 1		
				50 (AgL)		1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&We)	1200	1 of 1		
			Copper (total) µg/L	500 (AgL)	1200	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.6	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	44,000	1 of 1		
			Zinc (total) µg/L	25,000 (AgL)	41,000	1 of 1		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&We Not attaining PBC Not attaining AgL Not attaining	1999 - 2000 4 samples 2 sampling events	Cadmium (total) µg/L	84 (FC)	10 - 180	3 of 4	Inconclusive (Not attaining)	ADEQ collected 4 samples at 3 sites in 1999-2000. TMDLs for cadmium, copper, zinc and pH were approved by EPA in 2003. Assessed as "not attaining" due to copper, cadmium and zinc exceedances, and low pH. Although current data for cadmium and pH are "inconclusive," this reach will remain "not attaining" until data indicate that all uses are attaining for parameters addressed in the TMDL. Place on the Planning List for TMDL follow-up monitoring and missing core parameter: total lead.
				50 (AgL)		3 of 4	Inconclusive (Not attaining)	
			Copper (dissolved) µg/L	varies by hardness (A&We)	13 - 1200	3 of 4 samples 2 of 2 events (in 1999 and 2000)	Not attaining	
			Copper (total) µg/L	500 (AgL)	63 - 1200	1 of 4	Inconclusive (Not attaining)	
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.6 - 5.9	4 of 4	Inconclusive (Not attaining)	
			Zinc (dissolved) µg/L	varies by hardness (A&We)	2500 - 56,000	4 of 4 samples 2 of 2 events (in 1999 and 2000)	Not attaining	
			Zinc (total) µg/L	25,000 (AgL)	2900 - 56,000	3 of 4	Inconclusive (Not attaining)	
Alum Gulch 31°28'20"/110°43'51" - 31°29'17"/110°44'25" AZ15050301-561B A&Ww, FC, FBC, AgL	ADEQ TMDL Program Below Alum Falls, Above World's Fair Mine SCALG004.98	1999 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	160	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			Cadmium (total) µg/L	84 (FC)	160	1 of 1		
				50 (AgL)		1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	1500	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			Copper (total) µg/L	1300 (FBC)	1400	1 of 1		
				500 (AgL)		1 of 1		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.5	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	46,000	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			Zinc (total) µg/L	25,000 (AgL)	49,000	1 of 1		
	ADEQ TMDL Program Below World's Fair Mine SCALG004.82	1998 - 3 partial suites	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	28 - 194	3 of 3		
				varies by hardness (A&Ww chronic)		3 of 3		
			Cadmium (total) µg/L	84 (FC)	27 - 174	1 of 3		
				50 (AgL)		1 of 3		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	881 - 2110	3 of 3		
				varies by hardness (A&Ww chronic)		3 of 3		
			Copper (total) µg/L	1300 (FBC)	799 - 2140	1 of 3		
				500 (AgL)		3 of 3		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.3 - 3.7	3 of 3		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	6110 - 56,200	3 of 3		
				varies by hardness (A&Ww chronic)		3 of 3		
			Zinc (total) µg/L	25,000 (AgL)	5730 - 50,600	1 of 3		
	ADEQ TMDL Program 200 meters below World's Fair Mine SCALG004.61	1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	170 - 220	2 of 2		
				varies by hardness (A&Ww chronic)		2 of 2		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Cadmium (total) µg/L	84 (FC)	170 - 290	2 of 2		
				50 (AgL)		2 of 2		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	1600 - 2000	2 of 2		
				varies by hardness (A&Ww chronic)		2 of 2		
			Copper (total) µg/L	1300 (FBC)	1900 - 2100	2 of 2		
				500 (AgL)		2 of 2		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.2	2 of 2		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	49,000 - 53,000	2 of 2		
				varies by hardness (A&Ww chronic)		2 of 2		
			Zinc (total) µg/L	25,000 (AgL)	45,000 - 54,000	2 of 2		
	Summary Row A&Ww Not attaining FC Not attaining FBC Not attaining AgL Not attaining	1998 - 2000 6 samples 5 sampling events	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	28 - 220	5 of 5 events (in 1998 - 2000)	Not attaining	ADEQ collected 6 samples at 3 sites in 1998-2000. TMDLs for cadmium, copper, zinc and pH were approved by EPA in 2003. Assessed as "not attaining" due to cadmium, copper and zinc exceedances, and low pH. Although current data for cadmium and pH are "inconclusive," this reach will remain "not attaining" until data indicate that all uses are attaining for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring and for missing core parameters: *Escherichia coli*, total metals (lead and mercury), and turbidity/SSC.
				varies by hardness (A&Ww chronic)		5 of 5 events (100% exceed)	Not attaining	
			Cadmium (total) µg/L	84 (FC)	27 - 290	4 of 6	Inconclusive (Not attaining)	
				50 (AgL)		4 of 6	Inconclusive (Not attaining)	
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	881 - 2110	5 of 5 events (in 1998 - 2000)	Not attaining	
				varies by hardness (A&Ww chronic)		5 of 5 events (100% exceed)	Not attaining	
			Copper (total) µg/L	1300 (FBC)	799 - 2140	4 of 6	Inconclusive (Not attaining)	

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
				500 (AgL)		6 of 6	Inconclusive (Not attaining)	
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.2 - 3.7	6 of 6	Inconclusive (Not attaining)	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	6110 - 56,200	5 of 5 events (in 1998 - 2000)	Not attaining	
				varies by hardness (A&Ww chronic)		5 of 5 events (100% exceed)	Not attaining	
			Zinc (total) µg/L	25,000 (AgL)	5730 - 54,000	4 of 6	Inconclusive (Not attaining)	
Chimenea Creek headwaters - Rincon Creek AZ15050302-140 A&Ww, FC, FBC (tributary rule)	USGS Ambient Monitoring At Saguaro National Park SCCHM004.75 101593	2002 - 1 partial suite	No exceedances					
	USGS Ambient Monitoring Near Madrona ranger station SCCHM002.25 101584	2002 - 1 partial suite	No exceedances					
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive	2002 2 sampling events	No exceedances				Not assessed	Insufficient monitoring data to assess.
Cienega Creek headwaters - Gardner Canyon AZ15050302-006A A&Ww, FC, FBC, AgL Unique Water	ADEQ Ambient Monitoring SCCIE014.39 101176	2000 - 1 full suite 2001 - 5 full suites 2002 - 1 full suite	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - too numerous to count	1 of 5		
	ADEQ SEM Program Below Stevenson Canyon SCCIE12.38 100601	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Below Narrows SCCIE011.80 100600	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring SCCIE010.20 101177	2000 - 1 full suite 2001 - 4 full suites 2002 - 1 full suite	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - too numerous to count	2 of 6		
			Turbidity NTU	50 (A&Ww)	1 - 54	1 of 6		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Attaining FC Attaining FBC Impaired AgL Attaining	1998 - 2002 15 samples 8 sampling events	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - too numerous to count	3 of 11 samples 2 of 6 events (in 2001)	Impaired	ADEQ collected 15 samples at 4 sites in 1998-2002. Assessed as "impaired" due to *Escherichia coli* exceedances.
			Turbidity NTU	50 (A&Ww)	1 - 54	1 of 14	Attaining	
Cienega Creek Gardner Canyon - USGS gage station (Pantano Wash) AZ15050302-006B A&Ww, FBC, FC, AgL	ADEQ Ambient Monitoring Below tilted beds SCCIE003.55 100599	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring SCCIE002.66 101178	2000 - 1 full suite 2001 - 4 full suites 2002 - 1 full suite	Dissolved oxygen mg/L	>6.0 (90% saturation)	5.5 - 9.6 (80 - 109%)	1 of 6		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	ADEQ Ambient Monitoring SCCIE001.49 101179	2000 - 1 full suite 2001 - 4 full suites 2002 - 1 full suite	No exceedances					
	ADEQ Ambient Monitoring Above Davidson Canyon SCCIE001.20 100598	1998 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation)	5.4 (65%)	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	ADEQ Ambient Monitoring At Marsh Station Rd. Below Davidson Canyon SCCIE001.07 100263	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Above diversion dam SCCIE000.42 100595	1998 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation)	4.6 (57%)	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgL Attaining	1998 - 2002 16 samples 7 sampling events	No exceedances					ADEQ collected 16 samples at 5 sitesin 1998-2002. Assessed as "attaining all uses."

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Cox Gulch headwaters - Three R Canyon AZ15050301-560 A&Ww, FBC, FC (tributary rule)	ADEQ TMDL Program Above European Mine Canyon SCCIE001.04	1999 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	25	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	6000	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			Copper (total) µg/L	500 (AgL)	8700	1 of 1		
				1300 (FBC)		1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	5900	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
	ADEQ TMDL Program Below European Mine Canyon SCCIE000.85	1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	15 - 60	2 of 2		
				varies by hardness (A&Ww chronic)		2 of 2		
			Cadmium (total) µg/L	50 (AgL)	72	1 of 2		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	8200 - 18,000	2 of 2		
				varies by hardness (A&Ww chronic)		2 of 2		
			Copper (total) µg/L	500 (AgL)	8600 - 18,000	2 of 2		
				1300 (FBC)		2 of 2		
			pH SU	6.5 - 9.0 (A&Ww, FBC)	3.3	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	3200 - 11,000	2 of 2		
				varies by hardness (A&Ww chronic)		2 of 2		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Not attaining FC Inconclusive FBC Not attaining	1999 - 2000 3 samples 2 sampling events	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	15 - 60	3 of 3 samples 2 of 2 events (in 1999 and 2000)	Not attaining	ADEQ collected 3 samples at 2 sites in 1999-2000. Cadmium, copper, pH, and zinc loadings on this reach were addressed in the TMDL for Three R Canyon approved by EPA in 2003. *Although current data for cadmium, copper, zinc and pH are "inconclusive," the uses are assessed as "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow up monitoring and missing core parameters: *Escherichia coli*, dissolved oxygen, total mercury, turbidity/SSC.
				varies by hardness (A&Ww chronic)	15 - 60	3 of 3 samples 2 of 2 events (insufficient events)	Inconclusive (Not attaining*)	
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	8000 - 18,000	3 of 3 samples 2 of 2 events (in 1999 - 2000)	Not attaining	
				varies by hardness (A&Ww chronic)	8000 - 18,000	3 of 3 samples 2 of 2 events (insufficient events)	Inconclusive (Not attaining*)	
			Copper (total) µg/L	1300 (FBC)	8600 - 18,000	3 of 3	Inconclusive (Not attaining*)	
			pH SU	6.5 - 9.0 (A&Ww, FBC)	3.3	1 of 1	Inconclusive (Not attaining*)	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	3200 - 11,000	3 of 3 samples 2 of 2 events (in 1999 - 2000)	Not attaining	
				varies by hardness (A&Ww chronic)	3200 - 11,000	3 of 3 samples 2 of 2 events (insufficient events)	Inconclusive (Not attaining*)	
Cox Gulch, unnamed tributary of headwaters-Cox Gulch AZ15050301-877 A&We, PBC (tributary rule)	ADEQ TMDL Program Above Cox Gulch SCUCX000.01	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	7600	1 of 1		Missing core parameter: field pH.
			Copper (total) µg/L	1300 (PBC)	7600	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	2900	1 of 1		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&We Not attaining PBC Not attaining	1999 1 sampling event	Copper (dissolved) µg/L	varies by hardness (A&We)	7600	1 of 1 event (in 1999)	Inconclusive (Not attaining*)	Insufficient monitoring data to assess. Copper and zinc loadings from this reach were addressed in the TMDL for Three R Canyon approved by EPA in 2003. *Although current data copper and zinc are "inconclusive," the uses are assessed as "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.
			Copper (total) µg/L	1300 (PBC)	7600	1 of 1	Inconclusive (Not attaining*)	
			Zinc (dissolved) µg/L	varies by hardness (A&We)	2900	1 of 1 event (in 1999)	Inconclusive (Not attaining*)	
Harshaw Creek headwaters-Sonoita Creek AZ15050301-025 A&We, PBC, AgL	ADEQ TMDL Program Below unnamed trib (Endless Chain trib) SCHRC013.63	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	62	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	4.6	1 of 1		
	ADEQ TMDL Program Below Trench Camp Mine SCHRC011.56	1998 - 3 partial suites	No exceedances					
	Summary Row A&We Not attaining PBC Not attaining AgL Not attaining	1998 - 1999 4 samples 4 sampling events	Copper (dissolved) µg/L	varies by hardness (A&We)	<15 - 62	1 of 4 samples 1 of 4 events (in 1999)	Inconclusive (Not attaining*)	ADEQ collected 4 samples at 2 sites in 1998-1999. TMDLs for copper, zinc, and low pH were approved by EPA in 2003. Assessed as "not attaining" due to copper exceedances and low pH. *Although current copper and pH data are inconclusive, this reach will remain "not attaining" until all uses are being attained for parameters addressed in the TMDLs. Placed on the Planning List for TMDL follow-up monitoring and missing core parameter: total lead.
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	4.6 - 7.5	1 of 4	Inconclusive (Not attaining*)	
Harshaw Creek, unnamed tributary of (Endless Chain Mine trib) headwaters-Harshaw Creek AZ15050301-888 A&We, PBC (tributary rule)	ADEQ TMDL Program Above mined area SCUHR00.56	1999 - 2 partial suites	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	5.2 - 6.3	1 of 2		
	ADEQ TMDL Program Above Endless Chain Mine SCUHR000.38	1999 - 1 partial suite	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	6.2	1 of 1		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&We Not attaining PBC Not attaining	1999 3 samples 2 sampling events	pH SU	6.5 - 9.0 (A&We, PBC)	5.2 - 6.3	1 of 3	Inconclusive (Not attaining*)	Insufficient monitoring data to assess. pH loadings from this reach were addressed in the TMDL for Harshaw Creek approved by EPA in 2003. Although current pH data is inconclusive, the assessment will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.
Humboldt Canyon headwaters - Alum Gulch AZ15050301-340 A&Ww, FBC, FC (tributary rule)	ADEQ TMDL Program Intersection with jeep road SCHMC002.41	1999 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	2.8	1 of 1		Missing core parameters: *Escherichia coli*, total mercury, and turbidity/SSC.
				varies by hardness (A&Ww chronic)		1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	540	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			Copper (total) µg/L	500 (AgL)	550	1 of 1		
			pH SU	6.5 - 9.0 (A&Ww, PBC, AgL)	3.3	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	210	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
	ADEQ TMDL Program Base of falls Above Humboldt well SCHMC001.27	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	140	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.6	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	85	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Not attaining FBC Not attaining FC Inconclusive	1999 2 samples 1 sampling event	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	2.8	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining*)	Insufficient monitoring data to assess. Cadmium, copper, zinc and pH loadings from this tributary were addressed in the Alum Gulch TMDLs approved by EPA in 2003. *Although current data for cadmium, copper, pH and zinc are "inconclusive," assessments will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring and missing core parameters: *Escherichia coli*, turbidity/SSC, and total mercury.
				varies by hardness (A&Ww chronic)		2 of 2 samples 1 of 1 event (insufficient events)	Inconclusive (Not attaining*)	
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	140 - 540	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining*)	
				varies by hardness (A&Ww chronic)		2 of 2 samples 1 of 1 event (insufficient events)	Inconclusive (Not attaining*)	
			pH SU	6.5 - 9.0 (A&Ww, FBC)	3.3 - 3.6	2 of 2	Inconclusive (Not attaining*)	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	85 - 210	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining*)	
				varies by hardness (A&Ww chronic)		2 of 2 samples 1 of 1 event (insufficient events)	Inconclusive (Not attaining*)	
Loma Verde Wash headwaters - unnamed trib to Tanque Verde Wash AZ15050302-268 A&We, PBC (tributary rule)	USGS Ambient Monitoring At Saguaro National Park SCLMV003.51 101585	2002 - 1 partial suite	No exceedances					
	USGS Ambient Monitoring At Saguaro National Park SCLMV003.50 101594	2002 - 1 partial suite	No exceedances					
	Summary Row A&We Inconclusive PBC Inconclusive	2002 2 sampling events	No exceedances				Not assessed	Insufficient monitoring data to assess.
Madera Canyon Creek headwaters - tributary at 31°43'42"/110°52'50" AZ15050301-322A A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring 1 mile Below Sprung Spring SCMAD007.63 100588	2001 - 1 partial suite	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2001 1 sampling event	No exceedances				Not assessed	Insufficient monitoring data to assess.

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Madrona Creek headwaters - Rincon Creek AZ15050302-138 A&Ww, FC, FBC (tributary rule)	USGS Ambient Monitoring Near Madrona Ranger Station SCMDN001.32 101628	2002 - 1 partial suite	No exceedances					
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive**	**2002** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Nogales and East Nogales Wash Mexico border - Potrero Creek AZ15050301-011 A&Ww, PBC	ADEQ Fixed Station Network At Morley Street tunnel SCNGW004.23 100251	1998 - 3 full + 1 partial suite 1999 - 2 full + 2 partial suites 2000 - 3 full + 1 partial suite 2001 - 4 full suites 2002 - 1 full + 3 partial suites	Ammonia mg/L	varies by hardness (A&Ww chronic)	<0.02 - 9	4 of 18		
			Chlorine (total residual) µg/L	11 (A&Ww acute)	70 - 2830	12 of 12		
				5 (A&Ww chronic)		12 of 12		
			Chromium (total) µg/L	100 (PBC)	<10 - 250	1 of 18		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 24	1 of 18		
				varies by hardness (A&Ww chronic)		2 of 18		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.4 - 9.6 (63 - 108%)	3 of 18		
			Escherichia coli CFU/100 ml	576 (PBC)	<2 - too numerous to count`	9 of 14		
			Lead (total) µg/L	15 (PBC)	<5 - 190	2 of 18		
			Turbidity NTU	50 (A&Ww)	2 - 2730	5 of 18		
	ADEQ Ambient Monitoring South of Rte. 82 overpass to E. Calle Sonora Rd. bridge (5 sites) SCNGW003.8 - SCNGW001.7	1998 - 1 chlorine	Chlorine (total residual) µg/L	11 (A&Ww acute)	50 - 380	5 of 5		
				5 (A&Ww chronic)		5 of 5		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired PBC Impaired	1998 - 2002 21 samples 21 sampling events	Ammonia mg/L	varies by hardness (A&Ww chronic)	<0.02 - 9	4 of 18 samples 4 of 18 events (22% exceed)	Inconclusive	ADEQ collected 21 samples at 2 sites in 1998 - 2002. Assessed as "impaired" due to chlorine and *Escherichia coli* exceedances. *Reach was on the 2002 303(d) List for turbidity. Although current data are inconclusive based on the former standard, reach is will remain "not attaining" for turbidity and placed in 4D until sufficient turbidity or suspended sediment concentration (SSC) data are collected to make an assessment of "attaining" or "impaired." Placed on the Planning List due to: 1. Ammonia exceedances, 2. Copper exceedances, 3. Turbidity exceedances. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
			Chlorine (total residual) µg/L	11 (A&Ww acute)	70 - 2830	17 of 17 samples 12 of 12 events (1998-2001)	Impaired	
				5 (A&Ww chronic)		17 of 17 samples 12 of 12 events (100% exceed)	Impaired	
			Chromium (total) µg/L	100 (PBC)	<10 - 250	1 of 18	Attaining	
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 24	1 of 18 samples 1 of 18 events (last 3 years with no acute exceedances)	Attaining	
				varies by hardness (A&Ww chronic)		2 of 18 samples 2 of 18 events (11% exceed)	Inconclusive	
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.4 - 9.6 (63 - 108%)	3 of 18	Attaining	
			Escherichia coli CFU/100 ml	576 (PBC)	<2 - too numerous to count`	9 of 14 samples 9 of 14 events (exceedances every year)	Impaired	
			Lead (total) µg/L	15 (PBC)	<5 - 190	2 of 18	Attaining	
			Turbidity NTU	50 (A&Ww)	2 - 2730	5 of 18	Inconclusive (Not attaining*)	

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Potrero Creek Interstate19 - Santa Cruz River AZ15050301-500B A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring 0.3 miles north of Nogales Fire Station B SCPOT003.5 100705	1998 - 1 chlorine	Chlorine (total residual) µg/l	11 (A&Ww acute)	30	1 of 1		
				5 (A&Ww chronic)		1 of 1		
	ADEQ Ambient Monitoring Half mile north of Nogales suburban Fire Station B SCPOT003.38 100207	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Bridge on Old Tucson Road SCPOT001.9 100703	1998 - 1 chlorine	Chlorine (total residual) µg/L	11 (A&Ww acute)	80	1 of 1		
				5 (A&Ww chronic)		1 of 1		
	Friends of the Santa Cruz At Ruby Road SCPOT001.53 100571	1998 - 12 partial suites 1999 - 7 partial suites 2000 - 11 partial suites 2001 - 7 partial suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	0.5 - 14	3 of 31		
			Turbidity NTU	50 (A&Ww)	2 - 200	1 of 15		
	ADEQ Ambient Monitoring Above Wastewater Treatment Plant SCPOT000.72 100208	1998 - 1 partial suite	Chlorine (total residual) µg/L	11 (A&Ww acute)	80	1 of 1		
				5 (A&Ww chronic)		1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	17	1 of 1		
	ADEQ Ambient Monitoring At Santa Cruz River SCPOT000.1 100702	1998 - 1 chlorine	Chlorine (total residual) µg/L	11 (A&Ww acute)	800	1 of 1		
				5 (A&Ww chronic)		1 of 1		
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	**1998 - 2001** **47 samples** **43 sampling events**	**Chlorine (total residual) µg/L**	**11 (A&Ww acute)**	**30 - 800**	**4 of 4 samples 1 of 1 event (in 1998)**	**Inconclusive**	**ADEQ and Friends of the Santa Cruz River (a volunteer monitoring group) collected 47 samples at 6 sites in 1998-2001. Assessed as "inconclusive" and placed on the Planning List due to: 1. Chlorine exceedances, 2. Copper exceedances, 3. Missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (mercury, lead, and copper).**
				5 (A&Ww chronic)	**30 - 800**	**4 of 4 samples 1 of 1 event (insufficient events)**	**Inconclusive**	
			Copper (dissolved) µg/L	**varies by hardness (A&Ww chronic)**	**17**	**1 of 1 sample 1 of 2 events (insufficient events)**	**Inconclusive**	

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Dissolved oxygen mg/L	**>6.0 (90% saturation) (A&Ww)**	**0.5 - 14**	**3 of 33**	**Attaining**	
			Turbidity NTU	**50 (A&Ww)**	**2 - 200**	**1 of 17**	**Attaining**	
Redrock Canyon Creek headwaters - Harshaw Creek AZ15050301-576 A&Ww, FBC, FC	ADEQ Ambient Monitoring Near Patagonia SCRED002.17 101080	2000 - 1 full suite 2001 - 4 full suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	5.2 - 10.0 (71 - 110%)	1 of 4		Low dissolved oxygen due to natural drying of the stream and not anthropogenic causes. Not considered in final assessment.
	Summary Row **A&Ww Attaining** **FBC Attaining** **FC Attaining**	**2000 - 2001** **5 samples** **5 sampling events**	**No exceedances**					**ADEQ collected 5 samples in 2000-2001. Assessed as "attaining all uses."**
Sabino Canyon Creek tributary at 32°23'28"/110°47'00" - Tanque Verde Wash AZ15050302-014B A&Ww, FC, FBC, DWS, AgI	ADEQ Ambient Monitoring Above East Fork Sabino Cyn SCSAB007.56 100635	2001 - 1 partial suite	No exceedances					Low dissolved oxygen due to low flow conditions and not anthropogenic causes. Not considered in final assessment.
	ADEQ Ambient Monitoring Near Tucson SCSAB004.39 101152	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.7 - 10.5 (72 - 97%)	1 of 4		Lab detection limits for cadmium, copper, and zinc were too high to use results for assessment.
	Summary Row **A&Ww Inconclusive** **FC Attaining** **FBC Attaining** **DWS Attaining** **AgL Attaining**	**2000 - 2001** **5 samples** **4 sampling events**	**No exceedances**					**ADEQ collected 5 samples at 2 sites in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, zinc).**
Santa Cruz River headwaters - Mexico border AZ15050301-268 A&Ww, FC, FBC, AgI, AgL	Friends of the Santa Cruz River Near Lochiel SCSCR099.03 100242	2000 - 1 full suite 2001 - 3 full suites	No exceedances					
	Summary Row **A&Ww Attaining** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**2000 - 2001** **4 sampling events**	**No exceedances**					**Friends of the Santa Cruz River (a volunteer monitoring group) collected 4 samples in 2000-2001. Assessed as "attaining all uses."**
Santa Cruz River Mexican border - Nogales WWTP AZ15050301-010 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring At International Boundary SCSCR097.28 100239	1998 - 1 partial suite 1999 - 2 full suites 2000 - 4 full suites 2001 - 4 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.3 - 10.0 (64 - 113%)	2 of 11		
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 10,000	2 of 11		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Lead (total) µg/L	15 (DWS, FBC)	<5 - 62	1 of 11		
			Manganese (total) µg/L	980 (DWS)	<50 - 1500	1 of 11		
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	1 of 11		
			Turbidity NTU	50 (A&Ww)	0.96 - 1854	1 of 9		
	Friends of the Santa Cruz River At Guevavi Ranch SCSCR091.90 100246	1998 - 2 partial suites 1999 - 4 partial suites 2000 - 6 partial suites 2001 - 4 partial suites	Turbidity NTU	50 (A&Ww)	2 - 200	1 of 9		
	Summary Row A&Ww Attaining FC Attaining FBC Impaired DWS Attaining AgI Attaining AgL Attaining	1998 - 2001 27 samples 16 sampling events	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.3 - 10.0 (64 - 113%)	2 of 20	Attaining	ADEQ and Friends of the Santa Cruz River (a volunteer monitoring group) collected 27 samples at 2 sites in 1998-2001. Assessed as "Impaired" due to *Escherichia coli* exceedances.
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 10,000	2 of 23 samples 2 of 20 events (occurred in 1999 and 2000)	Impaired	
			Lead (total) µg/L	15 (DWS, FBC)	<5 - 62	1 of 15	Attaining	
			Manganese (total) µg/L	980 (DWS)	<50 - 1500	1 of 15	Attaining	
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	1 of 15	Attaining	
			Turbidity NTU	50 (A&Ww)	0.25 - 200	2 of 22	Attaining	
Santa Cruz River Nogales WWTP - Josephine Cyn. AZ15050301-009 A&Wedw, PBC, AgL	Friends of the Santa Cruz River At Rio Rico SCSCR087.08 100238	1998 - 12 partial suites 1999 - 5 partial suites 2000 - 9 partial suites 2001 - 7 partial suites	Turbidity NTU	50 (A&Wedw)	3 - 200	1 of 15		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wedw Inconclusive PBC Attaining AgL Inconclusive	1998 - 2001 33 sampling events	Turbidity NTU	50 (A&Wedw)	3 - 200	1 of 15	Attaining	Friends of the Santa Cruz River (a volunteer monitoring group) collected 33 samples in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).
Santa Cruz River Josephine Canyon - Tubac bridge AZ15050301-008A A&Wedw, PBC, AgL	Friends of the Santa Cruz River At Santa Gertrudis Lane SCSCR080.50 100247	1998 - 12 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 9 partial suites	Turbidity	50 (A&Wedw)	14 - 200	8 of 20		
	ADEQ Ambient Monitoring Near Tubac SCSCR080.45 101002	2000 - 1 full suite 2001 - 1 full suite	Chlorine (total residual) µg/L	11 (A&Wedw acute)	90	1 of 1		
				5 (A&Wedw chronic)		1 of 1		
	Summary Row A&Wedw Not attaining PBC Attaining AgL Inconclusive	1998 - 2001 46 samples 45 sampling events	Chlorine (total residual) µg/L	11 (A&Wedw acute)	90	1 of 1 event (in 2001)	Inconclusive	ADEQ and Friends of the Santa Cruz River (a volunteer monitoring group) collected 46 samples at 2 sites in 1998-2001. Assessed as "not attaining" due to exceedances of the former turbidity standard. *Turbidity exceedances indicate impairment based on the former turbidity standard. Assessed as "not attaining" until sufficient turbidity or suspended sediment concentration (SSC) data are collected to make an assessment of "attaining" or "impaired." Placed on the Planning List due to chlorine exceedance and missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).
				5 (A&Wedw chronic)	90	1 of 1 event (insufficient events)	Inconclusive	
			Turbidity NTU	50 (A&Wedw)	14 - 200	8 of 20	Not attaining (see comment*)	

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Santa Cruz River Tubac bridge - Sopori Wash AZ15050301-008B A&We, PBC, AgL	Friends of the Santa Cruz R. North of Chavez Siding Rd. SCSCR081.34 100244	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 9 partial suites	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	2.6 - 8.0	1 of 34		
	Summary Row A&We Inconclusive PBC Attaining AgL Inconclusive	1998 - 2001 42 samples 42 sampling events	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	2.6 - 8.0	1 of 34	Attaining	Friends of the Santa Cruz River (a volunteer monitoring group) collected 42 samples in 1998 - 2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).
Santa Cruz River Roger Rd. WWTP outfall - Rillito Creek AZ15050301-003B A&We, PBC	Pima Couny Wastewater Management Department SC-01 SCSCR033.90	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-02 SCSCR032.49	2001 - 2 dissolved oxygen	No exceedances					
	Summary Row A&Wedw Inconclusive PBC Inconclusive	2001 5 samples 3 samping events	No exceedances					Pima County collected 5 samples at 2 sites in 2001. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: *Escherichia coli*, pH, and dissolved metals (cadmium, copper, and zinc).
Santa Cruz River Canada del Oro - HUC boundary 15050303 AZ15050301-001 A&Wedw, PBC	Pima County Wastewater Management Department SC-03 SCSCR030.15	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-04 SCSCR028.64	2001 - 1 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-05 SCSCR027.69	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-06 SCSCR026.80	2001 - 1 dissolved oxygen	No exceedances					

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Ambient Monitoring Near Marana SCSCR025.40 101081	2001 - 4 full suites	Chlorine (total residual) µg/L	11 (A&Wedw acute)	0 - 480	1 of 2		
				5 (A&Wedw chronic)		1 of 2		
	Pima County Wastewater Management Department SC-07 SCSCR025.17	2001 - 2 dissolved oxygen	No exceedances					
	Summary Row A&Wedw Inconclusive PBC Attaining	**2001** **14 samples** **9 sampling events**	**Chlorine (total residual)** **µg/L**	**11** **(A&Wedw acute)**	**0 - 480**	**1 of 2 samples** **1 of 2 events** **(in 2001)**	**Inconclusive**	**ADEQ and Pima County collected a total of 14 samples at 6 sites in 2001. Assessed as "attaining some uses" and placed on the Planning List due to chlorine exceedance.**
				5 **(A&Wedw chronic)**	**0 - 480**	**1 of 2 samples** **1 of 2 events** **(insufficient events)**	**Inconclusive**	
Santa Cruz River HUC boundary 15050303 - Baumgartner Rd. AZ15050303-005A A&Wedw, PBC	Pima County Wastewater Management Department SC-08 SCSCR024.30	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-09 SCSCR022.19	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-10 SCSCR021.50	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-11 SCSCR019.39	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-12 SCSCR017.96	2001 - 3 dissolved oxygen	No exceedances					
	Summary Row A&Wedw Inconclusive PBC Inconclusive	**2001** **15 samples** **6 sampling events**	**No exceedances**					**Pima County collected 15 samples at 5 sites in 2001. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: *Escherichia coli*, pH, and dissolved metals (cadmium, copper, and zinc).**

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
Sonoita Creek 750 feet below WWTP - Santa Cruz AZ15050301-013C A&Ww, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring At Circle Z Ranch SCSON007.09 101154	2000 - 1 full suite 2001 - 3 full suites	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 34	1 of 4		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	67 - 860	2 of 4		
				varies by hardness (A&Ww chronic)		2 of 4		
	ADEQ TMDL Program Above Temporal Gulch, Below spring at Nature Cons. SCSON015.6	1998 - 3 partial suites	Dissolved oxygen mg/l	>6.0 (90% saturation) (A&Ww)	5.2 - 7.3 (64 - 81%)	1 of 3		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
	Summary Row A&Ww Impaired FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998 - 2001 7 sampling events	**Copper (dissolved) µg/L**	**varies by hardness (A&Wedw chronic)**	**<10 - 34**	**1 of 4 events (insufficient events)**	**Inconclusive**	**ADEQ collected 7 samples in 1998-2001. Assessed as "impaired" due to zinc exceedances.** **Placed on the Planning List due to copper exceedance.**
			Zinc (dissolved) µg/L	**varies by hardness (A&Wedw acute)**	**67 - 860**	**2 of 4 events (in 2000-2001)**	**Impaired**	
				varies by hardness (A&Wedw chronic)	**67 - 860**	**2 of 4 events (insufficient events)**	**Inconclusive**	
Sycamore Canyon Creek headwaters - Mexico border AZ15080200-002 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Above Penasco Canyon RMSYC002.33 100660	2001 - 1 partial suite	No exceedances					Missing core parameters: *Escherichia coli*, dissolved metals (copper, cadmium, and zinc). Lab reporting limits for dissolved metals were too high to use results for assessment.
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	**2001** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Three R Canyon headwaters - 31°28'35"/110°46'19" AZ15050301-558A A&We, PBC, AgL	ADEQ TMDL Program Above 3R Mine, south branch SCTHC004.50	1999 - 1 partial suite	Copper (dissolved) µg/L	veries by hardness (A&We)	380	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.7	1 of 1		
	ADEQ TMDL Program Above most upstream springs, below 3R mine SCTHC004.07	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	7200	1 of 1		
			Copper (total) µg/L	500 (AgL)	7700	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.5	1 of 1		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&We Not attaining PBC Not attaining AgL Not attaining	1999 2 samples 1 sampling event	Copper (dissolved) µg/L	varies by hardness (A&We)	380 - 7200	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining)	Insufficient monitoring data to assess. TMDLs for cadmium, copper, zinc , and pH were approved by EPA in 2003. *Although current pH and copper data are "inconclusive", designated uses will remain "not attaining" until data indicate that all uses are being attained for all parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring and missing core parameter: total lead.
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.7	2 of 2	Inconclusive (Not attaining*)	
Three R Canyon 31°28'35"/110°46'19"- 31°28'27"/110°47'12" AZ15050301-558B A&Ww, FC, FBC, AgL	ADEQ TMDL Program Below most upstream springs SCTHC004.01	1998 - 3 partial suites 1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	35 - 59	5 of 5		
				varies by hardness (A&Ww chronic)		5 of 5		
			Cadmium (total) µg/L	50 (AgL)	40 - 54	2 of 5		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	44,000 - 71,900	5 of 5		
				varies by hardness (A&Ww chronic)		5 of 5		
			Copper (total) µg/L	1300 (FBC)	45,200 - 66,100	5 of 5		
				500 (AgL)		5 of 5		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	2.9 - 3.1	4 of 4		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	850 - 1750	5 of 5		
				varies by hardness (A&Ww chronic)		5 of 5		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Not attaining FC Inconclusive FBC Not attaining AgL Not attaining	1998 - 2000 5 samples 5 sampling events	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	35 - 59	5 of 5 events (1998-2000)	Not attaining	ADEQ collected 5 samples in 1998-2000. TMDLs for cadmium, copper, zinc, and pH were approved by EPA in 2003. Assessed as "not attaining" due to cadmium, copper and zinc exceedances, and low pH. *Although current data for some designated uses are inconclusive, the reach will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring and missing core parameters: *Escherichia coli*, total lead, total mercury, and turbidity/SSC.
				varies by hardness (A&Ww chronic)	35 - 59	5 of 5 events (100% exceed)	Not attaining	
			Cadmium (total) µg/L	50 (AgL)	40 - 54	2 of 5	Inconclusive (Not attaining*)	
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	44,000 - 71,900	5 of 5 events (in 1998- 2000)	Not attaining	
				varies by hardness (A&Ww chronic)	44,000 - 71,900	5 of 5 events (100% exceed)	Not attaining	
			Copper (total) µg/L	1300 (FBC)	45,200 - 66,100	5 of 5	Inconclusive (Not attaining*)	
				500 (AgL)	45,200 - 66,100	5 of 5	Inconclusive (Not attaining*)	
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	2.9 - 3.1	4 of 5	Inconclusive (Not attaining*)	
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	850 - 1750	5 of 5 events (in 1998- 2000)	Not attaining	
				varies by hardness (A&Ww chronic)	850 - 1750	5 of 5 events (100% exceed)	Not attaining	
Three R Canyon 31°28'27"/110°47'12" - Sonoita Creek AZ15050301-558C A&We, PBC, AgL	ADEQ TMDL Program Below Cox Gulch SCTHC003.03	1998 - 2 partial suites	Copper (dissolved) µg/L	varies by hardness (A&We)	12,500 - 36,200	2 of 2		
			Copper (total) µg/L	1300 (PBC)	14,800 - 34,500	2 of 2		
				500 (AgL		2 of 2		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.4 - 3.9	2 of 2		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	920 - 5010	1 of 2		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&We Not attaining PBC Not attaining AgL Not attaining	1998 2 samples 2 sampling events	Copper (dissolved) µg/L	varies by hardness (A&We)	12,500 - 36,200	2 of 2 events (in 1998)	Not attaining	Insufficient monitoring data to assess. TMDLs for cadmium, copper, zinc, and pH were approved by EPA in 2003. *Although current data for pH and zinc are "inconclusive," assessments will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring and missing core parameters: *Escherichia coli*, total lead, total mercury, and turbidity/SSC.
			Copper (total) µg/L	1300 (PBC)	14,800 - 34,500	2 of 2	Inconclusive (Not attaining*)	
				500 (AgL)		2 of 2	Inconclusive (Not attaining*)	
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.4 - 3.9	2 of 2	Inconclusive (Not attaining*)	
			Zinc (dissolved) µg/L	varies by hardness (A&We)	920 - 5010	1 of 2 (in 1998)	Inconclusive (Not attaining*)	
Three R Canyon - unnamed tributary of headwaters - Three R Canyon AZ15050301-889 A&We, PBC (tributary rule)	ADEQ TMDL Program Upstream from 3R Mine, north tributary SCUTH00.30	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	1400	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC)	3.8	1 of 1		
	Summary Row A&We Not attaining PBC Not attaining	1999 1 sampling event	Copper (dissolved) µg/L	varies by hardness (A&We)	1400	1 of 1 (in 1999)	Inconclusive (Not attaining*)	Insufficient monitoring data to assess. Copper and pH loading from this reach were addressed in the Three R Canyon TMDL approved by EPA in 2003. *Although current copper and pH data are "inconclusive," assessments will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.
			pH SU	6.5 - 9.0 (A&We, PBC)	3.8	1 of 1	Inconclusive (Not attaining*)	

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
LAKE MONITORING DATA								
Arivaca Lake AZL15050304-0080 A&Ww, FC, FBC, AgI, AgL	ADEQ Lakes Program Routine Monitoring SCARI-A 100000	1998 - 3 partial suites 2000 - 1 partial suite 2001 - 3 full suites	Dissolved oxygen mg/L	>6.0 (A&Ww)	1.8 - 12.9 (25 - 150%)	1 of 7		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgI, AgL)	6.3 - 9.5	1 of 7		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2 - 7	1 of 7		
	Summary Row A&Ww Inconclusive FC Not attaining* FBC Inconclusive AgI Inconclusive AgL Inconclusive	1998 - 2001 7 samples 7 sampling events	**Dissolved oxygen mg/L**	**>6.0 (A&Ww)**	**1.8 - 12.91 (25 - 150%)**	**1 of 7**	**Inconclusive**	**ADEQ collected 7 samples in 1998-2001. Assessed as "not attaining" due to mercury in fish tissue. *A TMDL for mercury in fish tissue was approved by EPA in 1999. The lake will remain "not attaining" until sufficient data are collected to indicate that mercury in fish tissue is no longer a concern. Placed on the Planning List due to a fish kill in 1999. Fish kill may be evidence of a narrative standard violation. Also placed on the Planning List for TMDL follow-up monitoring, low dissolved oxygen, high pH, selenium exceedances, and missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).**
			pH SU	**6.5 - 9.0 (A&Ww, FBC, AgI, AgL)**	**6.3 - 9.5**	**1 of 7**	**Inconclusive**	
			Selenium (total) µg/L	**2.0 (A&Ww chronic)**	**<2 - 7**	**1 of 7 events**	**Inconclusive**	
Kennedy Lake AZL15050301-0720 A&Ww, FC, PBC	AGFD Urban Lakes Study SCKEN-A 100028	1998 - 11 field	No exceedances					
	AGFD Urban Lakes Study SCKEN-B 101052	1998 - 11 field	pH	6.5 - 9.0 (A&Ww, PBC)	8.5 - 9.3	1 of 11		
	AGFD Urban Lakes Study SCKEN-AB	1998 - 4 partial suites	No exceedances					
	Summary Row A&Ww Inconclusive FC Attaining PBC Inconclusive	**1998** **26 samples 11 sampling events**	**pH SU**	**6.5 - 9.0 (A&Ww, PBC)**	**8.5 - 9.3**	**1 of 11**	**Attaining**	**AGFD collected 26 samples at 3 sites in 1998. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).**
Lakeside Lake AZL15050302-0760 A&Ww, FC, PBC	AGFD Urban Lakes Study SCLAK-A 100034	1998 - 12 partial suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	2.4 - 17.1 (32 - 176%)	2 of 12		
			pH SU	6.5 - 9.0 (A&Ww, PBC)	7.3 - 9.9	2 of 12		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Univ. of Arizona Lake Study Site A	1998 - 11 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww)	0.05 - 1.4	1 of 10		
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.6 - 19.5	3 of 10		
			pH SU	6.5 - 9.0 (A&Ww, PBC)	6.8 - 9.5	1 of 10		
			Turbidity NTU	25 (A&Ww)	6 - 300	7 of 10		
	AGFD Urban Lakes Study and Routine Monitoring SCLAK-B 100035	1998 - 11 partial suites 2002 - 2 partial suites	Dissolved oxygen mg/L	>6.0 (A&Ww)	1.5 - 14.4 (18 - 149%)	2 of 11		
			pH SU	6.5 - 9.0 (A&Ww, PBC)	7.5 - 9.8	1 of 11		
	AGFD Urban Lakes Study SCLAK-AB 101059	1998 - 4 partial suites	No exceedances					
	Univ. of Arizona Lake Study Site H	1998 - 11 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww)	0.2 - 1.5	2 of 11		
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.0 - 17.1	5 of 11		
			Turbidity NTU	25 (A&Ww)	0.2 - 380	7 of 11		
	Univ. of Arizona Lake Study Site I	1998 - 11 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww)	0.3 - 2.4	1 of 11		
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.0 - 19.2	4 of 11		
			pH SU	6.5 - 9.0 (A&Ww, PBC)	7.3 - 9.4	1 of 11		
			Turbidity NTU	25 (A&Ww)	0.2 - 500	7 of 11		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Attaining PBC Inconclusive	1998 - 2002 55 samples 25 sampling events	Ammonia mg/L	varies by pH and temperature (A&Ww chronic)	0.05 - 2.4	4 of 33 samples 2 of 11 events (18% exceed)	Inconclusive	AGFD and Univ. of Arizona collected 55 samples in 1998-2002. Assessed as "impaired" due to low dissolved oxygen. *Turbidity exceedances indicate impairment based on the former standard. Assessed as "not attaining" for turbidity and placed on the 4D list. Investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed. Also placed on the Planning List due to chronic ammonia exceedances and missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.0 - 19.5	16 of 55	Impaired	
			pH SU	6.5 - 9.0 (A&Ww, PBC)	6.8 - 9.9	5 of 55	Attaining	
			Turbidity NTU	25 (A&Ww)	0.2 - 500	21 of 34	Not attaining (see comment*)	
Parker Canyon Lake AZL15050301-1040 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program SCPAK-A 100057	2000 - 1 partial suite 2001 - 3 full suites	No exceedances					
	ADEQ Lakes Program SCPAK-D 100058	1998 - 2 partial suites	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Attaining AgL Attaining	1998 - 2001 6 samples 6 sampling events	No exceedances					ADEQ collected 6 samples at 2 sites in 1998-2001. Assessed as "attaining some uses." Placed on the Planning List due to a fish consumption advisory (issued in 2002) for mercury in fish tissue and missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).
Patagonia Lake AZL15050301-1050 A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Lakes Program SCPAT-A 100060	1998 - 2 partial suites 2000 - 1 partial suite 2001 - 3 partial suites	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining	1998 - 2001 6 samples 6 sampling events	No exceedances					ADEQ collected 6 samples in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: *Escherichia coli* and turbidity.
Pena Blanca Lake AZL15050301-1070 A&Wc, FC, FBC, AgI, AgL	ADEQ Lakes Program SCPEN-A 100064	1998 - 2 partial suites 2000 - 1 partial suite 2001 - 3 partial suites	pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	6.1 - 8.6	1 of 6		
			Selenium (total) ug/L	2.0 (A&Wc chronic)	<2 - 4	1 of 6		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Turbidity NTU	10	2 - 13	1 of 3		
	Summary Row A&Wc Inconclusive FC Not attaining** FBC Inconclusive AgI Attaining AgL Inconclusive	1998 - 2001 6 samples 6 sampling events	pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	6.1 - 8.6	1 of 6	Inconclusive	ADEQ collected 6 samples in 1998-2001. **A TMDL for mercury in fish tissue was approved by EPA in 1999. Assessed as "not attaining" until sufficient data are collected to indicate that mercury in fish tissue is no longer a concern. Placed on the Planning List for TMDL follow-up monitoring, pH and selenium exceedances, and missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc). *Also placed on the Planning List due to exceedances of the former turbidity standard. Further investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed.
			Selenium (total) µg/L	2.0 (A&Wc chronic)	<2 - 4	1 of 6 samples 1 of 6 events (17% exceed)	Inconclusive	
			Turbidity NTU	10 (A&Wc)	2 - 13	1 of 3	Inconclusive (see comment*)	
Rose Canyon Lake AZL15050302-1260 A&Wc, FC, FBC, AgL	ADEQ Lakes Program SCROS-A 100183	1998 - 1 partial suite 2000 - 1 partial suite 2001 - 3 partial suites	pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	6.2 - 9.8	1 of 3 high 2 of 3 low		
			Turbidity NTU	10 (A&Wc)	4 - 30	1 of 4		
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive AgL Inconclusive	1998 - 2001 5 samples 5 sampling events	pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	6.2 - 9.8	3 of 3 (1 of 3 high, 2 of 3 low)	Inconclusive	ADEQ collected 5 samples in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to exceedances of pH and missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc). *Also placed on the Planning List due to exceedances of the former turbidity standard. Further investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed.
			Turbidity NTU	10 (A&Ww)	4 - 30	1 of 4	Inconclusive (see comment*)	

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- STREAM ASSESSMENTS				
Alum Gulch headwaters - 31°28'20"/110°43'51" 1 mile AZ15050301-561A	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. Missing core parameter: total lead. 2. TMDL follow-up monitoring for cadmium, copper, pH, and zinc. Total cadmium exceedances in 3 of 4 samples, dissolved copper exceedances in 2 of 2 sampling events, total copper exceedances in 1 of 4 samples, low pH in 4 of 4 samples, dissolved zinc exceedances in 2 of 2 sampling events, and total zinc exceedances in 3 of 4 samples.	Delist cadmium, copper, pH, and zinc. TMDLs for these parameters were approved by EPA in 2003. Place on the Planning List for TMDL follow-up monitoring. OK	
Alum Gulch 31°28'20"/110°43'51" - 31°29'17"/110°44'25" 1 mile AZ15050301-561B	A&Ww Not attaining FC Not attaining FBC Not attaining AgL Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. Missing core parameters: *Escherichia coli*, total metals (lead and mercury), and turbidity/SSC. 2. TMDL follow-up monitoring for cadmium, copper, pH, and zinc. Total cadmium exceedances in 4 of 6 samples, acute and chronic cadmium exceedances in 5 of 5 sampling events, acute and chronic copper exceedances in 5 of 5 sampling events, total copper exceedances in 6 of 6 samples, low pH in 6 of 6 samples, acute and chronic zinc exceedances in 5 of 5 sampling events, and total zinc exceedances in 4 of 6 samples.	Delist cadmium, copper, pH, and zinc. TMDLs for these parameters were approved by EPA in 2003. Place on the Planning List for TMDL follow-up monitoring. OK	
Chimenea Creek headwaters - Rincon Creek 8 miles AZ15050302-140	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (2 samples).		
Cienega Creek headwaters - Gardner Canyon 16 miles AZ15050302-006A Unique Water	A&Ww Attaining FC Attaining FBC Impaired AgL Attaining Category 5 -- Impaired		Add *Escherichia coli* to the 303(d) List due to OK exceedances in 2 of 6 sampling events (occurred in 2001).	
Cienega Creek Gardner Canyon - USGS gage station (Pantano Wash) 11 miles AZ15050302-006B	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 -- Attaining All Uses			
Cox Gulch headwaters - 3R Canyon 2 miles AZ15050301-560	A&Ww Not attaining FC Inconclusive FBC Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. Missing core parameters: *Escherichia coli*, dissolved oxygen, total mercury, and turbidity/SSC. 2. TMDL follow-up monitoring for cadmium, copper, pH, and zinc. Acute and chronic cadmium exceedances in 2 of 2 sampling events, acute and chronic copper exceedances in 2 of 2 sampling events, total copper exceedances in 3 of 3 samples, low pH in 1 of 1 sample, and acute and chronic zinc exceedances in 2 of 2 sampling events.	OK	Cadmium, copper, zinc and pH TMDLs for Three R Canyon included loadings for Cox Gulch (a tributary). These TMDLs were approved by EPA in 2003. Add to the Planning List for TMDL follow-up monitoring.

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Cox Gulch, unnamed tributary of headwaters - Cox Gulch 1 mile AZ15050301-877	A&We Not attaining PBC Not attaining Category 4A – Not attaining	On the Planning List due to: 1. Insufficient monitoring data to assess (1 sample). 2. TMDL follow-up monitoring for cadmium, copper, pH, and zinc. Total and acute copper and acute zinc exceedances in 1 of 1 sampling event.		Samples were collected on this reach in support of the Three R Canyon TMDLs. Cadmium, copper, zinc, and pH loadings from this reach were addressed in the Three R Canyon TMDLs approved by EPA in 2003. Therefore, assessed as "not attaining" and add to the Planning List for TMDL follow-up monitoring.
Harshaw Creek headwaters - Sonoita Creek 14 miles AZ15050301-025	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. Missing core parameter: total lead. 2. TMDL follow-up monitoring for copper and pH. Acute and chronic copper exceedance and low pH in 1 of 4 sampling events.	Delist zinc. Designated uses were changed from A&Ww to A&We, resulting in a change in applicable standards. No exceedances of the new standard.	Copper and pH TMDLs were approved by EPA in 2003. Although copper and pH were delisted in 2002 due to requirements in the Impaired Waters Identification Rule, a draft TMDL had already been completed. Place copper and pH on the Planning List for TMDL follow up monitoring.
Harshaw Creek, unnamed tributary of (Endless Chain Mine tributary) headwaters - Harshaw Creek 1.5 miles AZ15050301-888	A&We Not attaining PBC Not attaining Category 4A – Not attaining	On the Planning List for TMDL follow-up monitoring for copper and pH. Low pH in 1 of 3 samples.		Samples were collected on this reach in support of the Harshaw Creek TMDLs. Copper and pH loadings from this tributary were addressed in the Harshaw Creek TMDLs approved by EPA in 2003. Therefore, assessed as "not attaining" and add to the Planning List for TMDL follow-up monitoring.
Humbolt Canyon headwaters - Alum Gulch 2 miles AZ15050301-340	A&Ww Not attaining FC Inconclusive FBC Not attaining Category 4A – Not attaining	On the Planning List due to: 1. Missing core parameters: *Escherichia coli*, total mercury, and turbidity/SSC. 2. TMDL follow-up monitoring for cadmium, copper, zinc and pH. Acute and chronic cadmium, acute and chronic copper, acute and chronic zinc exceedances, and low pH in 1 of 1 sampling event.	OK	Samples were collected on this reach is support of the Alum Gulch TMDLs. Cadmium, copper, zinc and pH loadings from this tributary were addressed in the Alum Gulch TMDLs approved by EPA in 2003. Therefore, assessed as "not attaining" and add to the Planning List for TMDL follow-up monitoring.
Loma Verde Wash headwaters - unnamed trib to Tanque Verde Wash 4 miles AZ15050302-268	A&We Inconclusive PBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (2 samples).		
Madera Canyon Creek headwaters - tributary at 31°43'42"/110°52'50" 2 miles AZ15050301-322A	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (1 sample).		
Madrona Creek headwaters - Rincon Creek 7 miles AZ15050302-138	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (1 sample).		

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Nogales & East Nogales Washes Mexico border - Potrero Creek 6 miles AZ15050301-011	A&Ww Impaired PBC Impaired Category 5 -- Impaired	On the Planning List due to: 1. Chronic ammonia exceedances (4 of 18 sampling events, 22% exceed). 2. Chronic copper exceedances (2 of 18 sampling events, 11% exceed). 3. Former turbidity standard exceedances (5 of 18 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.	On the 303(d) List (since 1996) due to chlorine exceedances (12 of 12 sampling events). OK Add *Escherichia coli* exceedances (9 of 14 sampling events). OK Delist fecal coliform. Standard repealed in 2002 and replaced with the *Escherichia coli* standard. OK Delist turbidity. Standard repealed in 2002. Assessed turbidity as "not attaining" and placed in category 4D. Although current turbidity data are inconclusive (5 of 18 samples), reach will remain "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired." TURB/SSC	Bacterial contamination is due to insufficient wastewater infrastructure in Mexico. The chlorine tablets put in the stream to mitigate high bacterial contamination are toxic to aquatic life. EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Pena Blanca Canyon Creek Mexico border - Pena Blanca Lake 5 miles AZ15050301-808	A&Ww Inconclusive FBC Inconclusive FC Inconclusive Category 3 -- Inconclusive (not assessed)	On Planning List (no current monitoring data). Added in 2002 due to insufficient monitoring data.		
Potrero Creek Interstate 19 - Santa Cruz River 5 miles AZ15050301-500B	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to: 1. Acute and chronic chlorine exceedance (1 of 1 sampling event). 2. Chronic copper exceedance (1 of 2 sampling events). 3. Missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (mercury, lead, and copper).	Delist fecal coliform. Arizona replaced its fecal coliform standards with *Escherichia coli* standards. Reach is meeting the *Escherichia coli* standards. OK	
Redrock Canyon Creek headwaters - Harshaw Creek 13 miles AZ15050301-576	A&Ww Attaining FC Attaining FBC Attaining Category 1 -- Attaining All Uses			
Sabino Canyon Creek tributary at 32°23'28"/110°47'00" - Tanque Verde Wash 20 miles AZ15050302-014B (Reach was split into coldwater and warmwater segments since last assessment. No current data in 014A.)	A&Wc Inconclusive FC Attaining FBC Attaining DWS Attaining AgL Attaining Category 2 -- Attaining Some Uses	On the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc).		
Santa Cruz River headwaters - Mexico border 14 miles AZ15050301-268	A&Ww Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 1 -- Attaining All Uses			

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Santa Cruz River Mexico border - Nogales WWTP 17 miles AZ15050301-010	A&Ww Attaining FC Attaining FBC Impaired DWS Attaining AgI Attaining AgL Attaining Category 5 -- Impaired	Remove turbidity from the Planning List. Turbidity is supporting uses (2 of 22 samples exceed).	On the 303(d) List since 2002 due to *Escherichia coli* exceedances (2 of 20 sampling events). Delist fecal coliform as the standard has been replaced by *Escherichia coli* standards.	
Santa Cruz River Nogales WWTP - Josephine Canyon 9 miles AZ15050301-009	A&Wedw Inconclusive PBC Attaining AgL Inconclusive Category 2 – Attaining Some Uses	On the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).	Delist fecal coliform as the standard has been replaced by *Escherichia coli* standards. No *Escherichia coli* exceedances occurred in 15 samples taken in 2000 - 2001.	
Santa Cruz River Josephine Canyon - Tubac Bridge 5 miles AZ15050301-008A	A&Wedw Not attaining PBC Attaining AgL Inconclusive Category 4D - Not Attaining	On the Planning List due to: 1. Chlorine exceedance (1 of 1 sampling event). 2. Former turbidity standard exceedances (8 of 20 samples). Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. 3. Missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).	Delist fecal coliform as the standard has been replaced by *Escherichia coli* standards. No *Escherichia coli* exceedances occurred in 16 samples taken in 2000 - 2001. Delist turbidity - standard repealed in 2002. Assessed turbidity as "not attaining" and placed in category 4D. Turbidity exceedances in 8 of 20 samples indicate impairment based on the former standard. Reach will remain "not attaining" until sufficient turbidity or suspended sediment concentration (new sediment standard) data are collected to make an assessment of "attaining" or "impaired."	EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Santa Cruz River Tubac Bridge - Sopori Wash 9 miles AZ15050301-008B	A&We Inconclusive PBC Attaining AgL Inconclusive Category 2 – Attaining Some Uses	On the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).	Delist fecal coliform as the standard has been replace by *Escherichia coli* standards. No *Escherichia coli* exceedances occurred in 17 samples taken in 2000 - 2001.	
Santa Cruz River Roger Rd. WWTP outfall - Rillito Creek 3 miles AZ15050301-003B	A&Wedw Inconclusive PBC Inconclusive Category 3 – Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, pH, and dissolved metals (cadmium, copper, and zinc).		
Santa Cruz River Canada del Oro - HUC boundary 15050303 9 miles AZ15050301-001	A&Wedw Inconclusive PBC Attaining Category 2 — Attaining Some Uses	On the Planning List due to acute and chronic chlorine exceedance (1 of 2 sampling events).		
Santa Cruz River HUC boundary 15050303 - Baumgartner Rd. 25 miles AZ15050303-005A	A&Wedw Inconclusive PBC Inconclusive Category 3 – Inconclusive	On the Planning List due to missing core parameters: *Escherichia coli*, pH, and dissolved metals (cadmium, copper, and zinc).		
Sonoita Creek headwaters - Patagonia WWTP 14 miles AZ15050301-013A	A&We Inconclusive PBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On Planning List (no current monitoring data). Added in 2002 due to missing core parameters.		

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Sonoita Creek 750 feet below WWTP - Santa Cruz River 19 miles AZ15050301-013C	A&Ww Impaired FC Attaining FBC Attaining AgI Attaining AgL Attaining Category 5 – Impaired	On the Planning List due to chronic copper exceedance (1 of 4 sampling events).	Add zinc to the 303(d) List due to acute zinc exceedances in 2 of 4 sampling events. OK	
Sycamore Canyon Creek headwaters - Mexico border 10 miles AZ15080200-002	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive (not assessed)	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Three R Canyon headwaters - 31°28'35"/110°46'19" 1 mile AZ15050301-558A (This stream has been resegmented since the last assessment)	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A – Not attaining	On the Planning List due to: 1. Insufficient monitoring events to assess (only 2 sampling events). 2. TMDL follow-up monitoring for cadmium, copper, zinc, and pH. Acute and chronic copper exceedance (1 of 1 sampling event) and low pH (1 of 1 sample).	Delist cadmium, copper, zinc, and pH. TMDLs for these parameters were approved by EPA in 2003. Placed on the Planning List for TMDL follow-up monitoring. OK	
Three R Canyon 31°28'35"/110°46'19"- 31°28'27"/110°47'12" 1 mile AZ15050301-558B (This stream has been resegmented since the last assessment)	A&Ww Not attaining FC Inconclusive FBC Not attaining AgL Not attaining Category 4A – Not attaining	On the Planning List due to: 1. Missing core parameters: *Escherichia coli*, total metals (lead and mercury), and turbidity/SSC. 2. TMDL follow-up monitoring for cadmium, copper, zinc, and pH. Cadmium, copper, and zinc exceedances (5 of 5 sampling events for each), and low pH in 5 of 5 samples.	Delist cadmium, copper, zinc, and pH. TMDLs for these parameters were approved by EPA in 2003. Placed on the Planning List for TMDL follow-up monitoring. OK	
Three R Canyon 31°28'27"/110°47'12" - Sonoita Creek 3 miles AZ15050301-558C (This stream has been resegmented since the last assessment)	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A – Not attaining	On the Planning List due to: 1. Missing core parameter: total lead. 2. TMDL follow-up monitoring for cadmium, copper, zinc, and pH. Copper exceedances (2 of 2 sampling events), zinc exceedances (1 of 2 sampling events) and low pH in 2 of 2 samples.	Delist cadmium, copper, zinc, and pH. TMDLs for these parameters were approved by EPA in 2003. Placed on the Planning List for TMDL follow up monitoring. OK	
Three R Canyon, unnamed tributary of headwaters - Three R Canyon 2 miles AZ15050301-889	A&We Not attaining PBC Not attaining Category 4A – Not attaining	On the Planning List due to: 1. TMDL follow-up monitoring for cadmium, copper, zinc, and pH. Copper exceedance in 1 of 1 sampling event and low pH in 1 of 1 sample. 2. Insufficient monitoring data.	OK	Samples were collected on this reach in support of the Three R Canyon TMDLs. Cadmium, copper, zinc, and pH loadings from this tributary were addressed in the Three R Canyon TMDLs approved by EPA in 2003. Therefore, assessed as "not attaining" and add to the Planning List for TMDL follow-up monitoring.

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- LAKE ASSESSMENTS				
Arivaca Lake 118 acres AZL15050304-0080	A&Ww Inconclusive FC Not attaining FBC Inconclusive AgI Inconclusive AgL Inconclusive Category 4A -- Not Attaining Trophic status -- Hypereutrophic	On the Planning List due to: 1. Dissolved oxygen exceedance (1 of 7 samples). 2. pH exceedance (1 of 7 samples). 3. Selenium exceedance (1 of 7 sampling events). 4. Fish kill in 1999 related to algal blooms, which may be evidence of a narrative standard violation. 5. Missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc). 6. TMDL follow-up monitoring for mercury concentration in fish tissue.	OK	TMDL for mercury in fish tissue was approved by EPA in 1999. Added to the Planning List in 2002 for TMDL follow-up monitoring.
Kennedy Lake 10 acres AZL15050301-0720	A&Ww Inconclusive FC Attaining PBC Inconclusive Category 2 -- Attaining Some Uses Trophic status -- Eutrophic	On the Planning List due to missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).		
Lakeside Lake 15 acres AZL15050302-0760	A&Ww Impaired FC Attaining PBC Inconclusive Category 5 -- Impaired Trophic status -- Hypereutrophic	On the Planning List due to: 1. Chronic ammonia exceedances (2 of 11 sampling events, 18% exceed). 2. Former turbidity standard exceedances (21 of 34 samples). Investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed. 3. Missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc).	Add dissolved oxygen to the 303(d) List (low dissolved oxygen in 16 of 55 samples). OK add NH_3	City installed an aeration system in the lake in June 2002, but exceedances are still occurring. A draft nutrient TMDL, providing for dissolved oxygen and pH, was completed in 2002, but has not been approved by EPA. Assessed turbidity as "not attaining" and placed in category 4D. Turbidity exceedances in 21 of 34 samples indicate impairment based on the former standard. Placed on the Planning List for follow-up monitoring. EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Parker Canyon Lake 129 acres AZL15050301-1040	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic status -- Mesotrophic	On the Planning List due to 1. Missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc). 2. Fish consumption advisory issued in 2002 may be evident of a narrative toxic standards violation.	add Hg	For the 2002 303(d) List, EPA placed waters with a fish consumption advisory on the 303(d) List, as the advisory was considered adequate evidence of a narrative toxic standards violation. The advisory for Parker Lake was issued after the last 303(d) List. ADEQ anticipates that EPA will take the same action and place this water on the 2004 303(d) List.

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Patagonia Lake 230 acres AZL15050301-1050	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining AgI Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic status -- Eutrophic	On the planning List due to missing core parameters: *Escherichia coli* and turbidity. Remove dissolved oxygen from the Planning List. No exceedances in 6 samples indicates support of designated uses.		
Pena Blanca Lake 51 acres AZL15050301-1070	A&Wc Inconclusive FC Not attaining FBC Inconclusive AgI Attaining AgL Inconclusive Category 4A — Not attaining Trophic status -- Eutrophic	On the Planning List due to: 1. Low pH (1 of 6 samples). 2. Chronic selenium exceedance (1 of 6 sampling events). 3. Former turbidity standard exceedance (1 of 3 samples). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed. 4. Missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, and zinc). 5. TMDL follow-up monitoring for mercury concentration in fish tissue.		TMDL for mercury in fish tissue was approved by EPA in 1999. Added to the Planning List in 2002 for TMDL follow-up monitoring.
Rose Canyon Lake 7 acres AZL15050302-1260	A&Wc Inconclusive FC Attaining FBC Inconclusive AgL Inconclusive Category 2 – Attaining Some Uses Trophic status – Eutrophic	On the Planning List due to: 1. Low pH (2 of 3 samples) and high pH (1 of 3 samples). 2. Former turbidity standard exceedance (1 of 4 samples). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed. 3. Missing core parameters: *Escherichia coli* and dissolved metals (cadmium, copper, zinc).		

Upper Gila map being drafted

TABLE 21. UPPER GILA WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
STREAM MONITORING DATA								
Ash Creek Unnamed tributary at 32°45'37"/ 109°52'22" - Gila River AZ15040005-040B A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring At Forest Road #307 UGA1H008.62 100830	1999 - 1 full suite 2000 - 2 partial suites 2002 - 2 full suites	No exceedances					Lab reporting limits for the dissolved metals (cadmium, copper, and zinc) were too high to use results for assessment.
	Summary Row **A&Ww Inconclusive** **FC Attaining** **FBC Attaining** **AgL Attaining**	**1999 - 2002** **5 sampling events**	**No exceedances**					**ADEQ collected 5 samples in 1999 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc).**
Blue River New Mexico border - KP Creek AZ15040004-026 A&Wc, FC, FBC, AgI, AgL	ADEQ TMDL Program Bobcat Flat (Site 5) UGBLR043.03 101184	2001 - 4 field	No exceedances					
	ADEQ TMDL Program Lazy YJ Ranch (Site 6) UGBLR042.69 101185	2001 - 4 field	Turbidity NTU	10 (A&Wc)	<1 - 13	1 of 4		
	ADEQ TMDL Program Below Nolan Creek (Site 7) UGBLR041.93 101186	2001 - 4 field	No exceedances					
	ADEQ TMDL Program Above Blue Crossing (Site 8) UGBLR039.84 101187	2001 - 4 field	No exceedances					
	ADEQ TMDL Program Below Blue Crossing (Site 9) UGBLR039.67 101188	2001 - 4 field	No exceedances					
	ADEQ TMDL Program Above Balke Crossing (Site 10) UGBLR035.10 101189	2001 - 4 field	No exceedances					
	ADEQ TMDL Program Below Balke Crossing (Site 11) UGBLR034.75 101190	2001 - 4 field	No exceedances					

TABLE 21. UPPER GILA WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Biocriteria & Ambient Monitoring Below Jackson Box (upper) UGBLR033.04 100419	1999 - 1 partial suite 2000 - 3 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.0 - 7.2 (84 - 96%)	2 of 4		
	ADEQ TMDL Program Above Box (Site 12) UGBLR030.42 101191	2001 - 4 field	No exceedances					
	ADEQ TMDL Program Below Box (Site 13) UGBLR029.50 101192	2001 - 4 field	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Attaining** **AgI Inconclusive** **AgL Inconclusive**	**1999-2001** **40 samples** **8 sampling events**	**Dissolved oxygen mg/L**	**> 7.0 (90% saturation) (A&Wc)**	**6.0 - 7.5 (84 - 102%)**	**2 of 22**	**Attaining**	**ADEQ collected 40 samples in 1999-2001, primarily in support of a turbidity investigation. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: total boron, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, manganese, copper, and lead).**
			Turbidity NTU	**10 (A&Wc)**	**<1 - 13**	**1 of 40**	**Attaining**	
Blue River KP Creek - Strayhorse Creek AZ15040004-025A A&Wc, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Below KP Creek UGBLR021.95 100835	1999 - 1 partial suite 2000 - 3 partial suites	No exceedances					
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Attaining** **AgI Inconclusive** **AgL Inconclusive**	**1999 - 2000** **4 sampling events**	**No exceedances**					**ADEQ collected 4 samples in 1999 - 2000. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: total boron, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, manganese, copper, and lead).**
Blue River Strayhorse Creek - San Francisco River AZ15040004-025B A&Ww, FC, FBC, AgI, AgL	ADEQ TMDL Program Above Fritz Ranch UGBLR008.07 100420	2001 - 3 field	No exceedances					
	ADEQ Fixed Station At Juan Miller Road UGBLR005.68 100398	1998 - 1 full suites 1999 - 5 full suites 2000 - 4 full suites 2000 - 4 full suites 2001 - 4 full suites	No exceedances					
	ADEQ TMDL Program Near Clifton UGBLR005.59 100770	2001 - 4 field	No exceedances					

TABLE 21. UPPER GILA WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining	1998-2002 25 samples 20 sampling events	No exceedances					ADEQ collected 25 samples at 3 sites from 1998-2002. Assessed as "attaining all uses."
Bonita Creek Park Creek - Gila River AZ15040005-030 A&Ww, FC, FBC, DWS, AgL Unique Water	ADEQ Ambient Monitoring Below Indian Reservation boundary UGBON011.31 100188	1999 - 1 full suite 2000 - 1 full + 2 partial suites	No exceedances					
	ADEQ Ambient Monitoring Above Gila River UGBON000.20 100185	1999 - 1 partial suite 2000 - 1 full + 3 partial suites 2001 - 1 full + 1 partial suite 2002 - 1 full suite	Turbidity NTU	15 (Unique Water) (A&Ww)	<1 - 49	1 of 8		
	Summary Row A&Ww Attaining FC Attaining FBC Attaining DWS Attaining AgL Attaining	1998-2002 12 samples 11 sampling events	Turbidity NTU	15 (Unique Water) (A&Ww)	<1 - 49	1 of 11	Attaining	ADEQ collected 12 samples at 2 sites in 1998-2002. Assessed as "attaining all uses."
Campbell Blue Creek headwaters - Blue River AZ15040004-028 A&Wc, FC, FBC, AgL	ADEQ TMDL Program Above Turkey Creek (site 2) UGCMB002.30 101181	2001 - 4 field	No exceedances					Lab reporting limits for some dissolved copper samples were too high to use results for assessment.
	ADEQ Ambient Monitoring Above K E Canyon UGCMB002.16 100522	1999 - 1 full suite 2000 - 2 full + 1 partial suites	No exceedances					
	ADEQ TMDL Program Below Turkey Creek (site 3) UGCMB001.46 101182	2001 - 4 field	No exceedances					
	ADEQ TMDL Program Above Dry Blue (site 4) UGCMB000.16 101183	2001 - 4 field	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining AgL Attaining	1999-2001 16 samples 8 sampling events	No exceedances					ADEQ collected 16 samples at 4 sites from 1999-2001. Assessed as "attaining some uses" and added to the Planning List due to missing core parameter: dissolved copper.

TABLE 21. UPPER GILA WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
Cave Creek headwaters - South Fork of Cave Creek AZ15040006-852A A&Wc, FC, FBC, AgI, AgL Unique Water	ADEQ Unique Waters Program Above Herb Martyr Campground UGCAV009.86 101108	1998 - 2 partial suites 1999 - 1 partial suite 2001 - 1 full suite 2002 - 1 full suite	No exceedances					
	ADEQ Unique Waters Program Above summer homes along FS Road 42A UGCAV008.92 101107	1998 - 1 partial suite 1999 - 1 partial suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.4 - 8.1 (81 - 92%)	1 of 2		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
	ADEQ Unique Waters Program Above SW Research Station UGCAV008.49 101106	1998 - 2 partial suites	No exceedances					
	ADEQ Unique Waters Program Above South Fork of Cave Creek UGCAV007.70 101105	1998 - 2 partial suites	No exceedances					
	ADEQ Unique Waters Program Below North Fork Cave Creek UGCAV007.64 100933	1998 - 1 partial suite 1999 - 1 full + 1 partial suite 2000 - 3 full + 1 partial suite 2001 - 1 full + 1 partial suite 2002 - 1 full suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.2 - 9.3 (78 - 107%)	1 of 10		Stream is dominated by thermal spring at low flows (and high total dissolved solids). Dissolved oxygen is naturally below surface water standards in such spring recharge areas. Therefore, low dissolved oxygen not included in final assessment. Lab reporting limits for 8 other six selenium samples were too high to use results for assessment.
			Selenium (total) µg/L	2 (A&Wc chronic)	<5 - 8.8	2 of 2		
			Turbidity NTU	10 (A&Wc)	<1-15	1 of 10		
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**1998-2002** **21 samples** **10 sampling events**	**Selenium (total)** **µg/L**	**2** **(A&Wc chronic)**	**<5 - 8.8**	**2 of 2 events (insufficient events)**	**Inconclusive**	**ADEQ collected 21 samples at 5 sites in 1998-2002. Assessed as "attaining some uses" and placed on the Planning List due to selenium exceedances.**
			Turbidity **NTU**	**10** **(A&Wc)**	**<1 - 15**	**1 of 18**	**Attaining**	
Cave Creek South Fork of Cave Creek - USFS boundary AZ15040006-852B A&Ww, FC, FBC, AgI, AgL Unique Water	ADEQ Unique Waters Program Below South Fork of Cave Creek UGCAV007.46 101104	1998 - 2 partial suites	*Escherichia coli* CFU/100 ml	235 (FBC)	257	1 of 1		Exceedance occurred during very high flow (normally <1 cfs, flow at 65 cfs).

TABLE 21. UPPER GILA WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	ADEQ Unique Waters Program Below Coronado Ranger Station UGCAV006.55 100937	1998 - 2 partial suites 1999 - 1 full suite 2000 - 1 full + 2 partial suites 2001 - 2 full suites	Turbidity NTU	50 (A&Ww)	<1-64	1 of 8		Exceedance occurred during very high flow (normally <1 cfs, flow at 65 cfs).
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	**1998-2001** **10 samples** **8 sampling events**	***Escherichia coli*** **CFU / 100 ml**	**235** **(FBC)**	**257**	**1 of 8 events (None in the last 3 years of sampling)**	**Attaining**	**ADEQ collected 10 samples at 2 sites in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.**
			Turbidity **NTU**	**50** **(A&Ww)**	**< 1 - 64**	**1 of 9**	**Inconclusive (see comment)**	
Cave Creek, North Fork headwaters - Cave Creek AZ15040006-856 A&Wc, FC, FBC (tributary rule)	ADEQ Unique Waters Program Above Cave Creek UGNCV000.03 101129	1999 - 1 partial suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.3 (73%)	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling at thermal spring, and not anthropogenic causes. Not included in the final assessment. Missing core parameters: dissolved zinc and total mercury.
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive	**1999** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Cave Creek, South Fork headwaters - Cave Creek AZ15040006-849 A&Wc, FC, FBC, AgI, AgL Unique Water	ADEQ Biocriteria Program Above South Fork Campground UGSCV002.45 100640	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Above South Fork Campground UGSCV002.26 100639	1998 - 1 full + 1 partial suite 1999 - 2 full suites 2000 - 2 full + 2 partial suites 2001 - 2 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	3.6 - 6.8 (40 - 98%)	5 of 10		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 240	1 of 9		Exceedances coincided with very high flow (normally < 1 cfs, flow at 22 cfs). Pristine watershed.
			Turbidity NTU	10 (A&Wc)	<1 - 36	1 of 10		
	ADEQ Unique Waters Program Above confluence with Cave Creek UGSCV000.12 101109	1998 - 1 full + 1 partial suite	No exceedances					

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1998 - 2001 13 samples 10 sampling events	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - 240	1 of 10 events (in 2000)	Inconclusive	ADEQ collected 13 samples at 3 sites in 1998 - 2001. Assessed as "attaining some uses" and placed on the Planning List due to *Escherichia coli* exceedance.
			Turbidity NTU	10	<1 - 36	1 of 13	Attaining	
Eagle Creek headwaters - unnamed tributary at 33°23'24" / 109°29'35" AZ15040005-028A A&Wc, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring Above Honeymoon Campground UGEAG035.99 100535	1999 - 1 full suite 2000 - 1 full + 2 partial suites	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Attaining DWS Inconclusive AgI Inconclusive AgL Inconclusive	1999-2000 4 sampling events	No exceedances					ADEQ collected 4 samples in 1999-2000. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: total boron, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, arsenic, chromium, lead, manganese, and copper).
Eagle Creek Willow Creek - Sheep Wash AZ15040005-027 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring Above Sheep Wash Crossing UGEAG023.34 100536	1999 - 1 full suite 2000 - 1 full + 2 partial suites 2002 - 1 full suite	No exceedances					
	Summary Row A&Ww Attaining FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining	1999 - 2002 5 sampling events	No exceedances					ADEQ collected 5 samples in 1999-2002. Assessed as "attaining all uses."
Eagle Creek Sheep Wash - Gila River AZ15040005-025 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring Below Gold Gulch @ Morenci UGEAG006.05 100806	1999 - 1 full suite 2000 - 1 full + 2 partial suites 2002 - 1 full suite	No exceedances					
	Summary Row A&Ww Attaining FC Attaining FBC Attaining DWS Attaining AgI Attaining AgL Attaining	1999 - 2002 5 sampling events	No exceedances					ADEQ collected 5 samples in 1999-2002. Assessed as "attaining all uses."

TABLE 21. UPPER GILA WATERSHED – 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
East Turkey Creek headwaters - tributary at 31°58'22" / 109°12'17" AZ15040006-837A A&Wc, FC, FBC, AgL	ADEQ Biocriteria Program Above Forest Road 42 UGETK007.70 100545	1998 - 1 partial suite	No exceedances					Missing core parameters: *Escherichia coli*, dissolved metals (copper and zinc), and total metals (mercury, copper, and lead).
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgL Inconclusive**	**1998** **1 sampling event**	**No exceedances**				**Not assessed**	**Insufficient monitoring data to assess.**
Frye Canyon Creek headwaters - Frye Mesa Reservoir AZ15040005-988A A&Wc, FC, FBC, DWS, AgL	ADEQ Ambient Monitoring First crossing of Trail #36 UGFRY007.00 100720	1999 - 1 full suite 2000 - 2 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.74 - 7.76 (78-88%)	1 of 3		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
	Summary Row **A&Wc Inconclusive** **FC Inconclusive** **FBC Attaining** **DWS Inconclusive** **AgL Inconclusive**	**1999 - 2000** **3 sampling events**	**No exceedances**					**ADEQ collected 3 samples in 1999-2000. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (copper, cadmium, and zinc) and total metals (mercury, arsenic, chromium, lead, and copper).**
Gila River NM border - Bitter Creek AZ15040002-004 A&Ww, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Duncan at New Mexico border UGGLR205.35 100808	1999 - 1 full suite 2000 - 1 full suite 2002 - 2 full suites	Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 5.8	1 of 1		Lab reporting limits for 4 additional samples were too high to use results for assessment.
	Summary Row **A&Ww Inconclusive** **FC Attaining** **FBC Attaining** **AgI Attaining** **AgL Attaining**	**1998 - 2002** **4 sampling events**	**Selenium (total)** **µg/L**	**2** **(A&Ww chronic)**	**<5 - 5.8**	**1 of 1 event (insufficient events)**	**Inconclusive**	**ADEQ collected 4 samples in 1998 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to selenium exceedance.**
Gila River Skully Creek - San Francisco AZ15040002-001 A&Ww, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Above Old Safford Bridge UGGLR197.26 100809	1999 - 1 full suite 2000 - 1 full + 2 partial suites 2001 - 1 full suite 2002 - 5 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.6 - 10.1 (81-130%)	1 of 9		Exceedance occurred during higher flow event.
			Lead (total) µg/L	15 (FBC)	<5 - 110	1 of 8		Exceedance occurred during higher flow event.
			Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 7	3 of 3		Reporting limits of 7 other selenium samples were too high to use results for assessment.
			Turbidity NTU	50 (A&Ww)	3 - > 999	2 of 10		Both exceedances coincide with higher flow events. (Note that 4 SSC samples in 2002 did not exceed standards.)

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Impaired FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1999 - 2002 10 sampling events	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.61 - 10.1 (81-130%)	1 of 9	Inconclusive	ADEQ collected 10 samples 1998-2002. Assessed as "impaired" due to chronic selenium exceedances. Placed on the Planning List due to lead exceedance and low dissolved oxygen.
			Lead (total) µg/L	15 (FBC)	<5 - 110	1 of 8	Inconclusive	
			Selenium (total) µg/L	2 (A&Ww chronic)	<5 - 7	3 of 3 events	Impaired	
			Turbidity NTU	50 (A&Ww)	3 - > 999	2 of 10	Attaining	
Gila River Bonita Creek - Yuma Wash AZ15040005-022 A&Ww, FC, FBC, AgI, AgL	USGS Fixed Station #09448500 Solomon above Safford Valley UGGLR188.98 100729	1998 - 6 full suites 1999 - 6 full suites 2000 - 4 full suites 2001 - 4 full suites 2002 - 4 full suites	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<2 - 9	1 of 23		Exceedance occurred during higher flow event.
			Escherichia coli CFU/100 ml	235 (FBC)	<1- 2300	3 of 23		
			Lead (total) µg/L	15 (FBC)	1 - 94	4 of 21		All exceedances coincide with higher flow events.
			Suspended sediment concentration (SSC) mg/L	80 (geometric mean) (A&Ww)	8 - 6410	see comment below		
			Turbidity NTU	50 (A&Ww)	<1-10,000	7 of 24		Four of the exceedances coincide with higher flow events.

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Ww Not attaining FC Attaining FBC Impaired AgI Attaining AgL Attaining	1998-2002 24 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<2 - 9	1 of 23 events (4% exceed)	Attaining	USGS collected 24 samples in 1998 - 2002. Assessed as "impaired" due to *Escherichia coli* exceedances. *Turbidity exceedances indicate impairment based on the former standard. Reach will remain "not attaining" and placed on 4D for turbidity until sufficient turbidity or suspended sediment concentration data are collected to indicate attainment or impairment of designated uses. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. There are also potential exceedances of the SSC geometric mean standard. Despite issues applying the standard (see discussion in Chapter III), EPA is developing methods to determine base flow which may result in this reach being added to the 2004 303(d) List by EPA. Also placed on the Planning list due to lead exceedances.
			Escherichia coli CFU	235 (FBC)	<1- 2300	3 of 8 events (in 1998 and 2000)	Impaired	
			Lead (total) µg/L	15 (FBC)	1 - 94	4 of 21	Inconclusive	
			Suspended sediment conc. (SSC) mg/L	80 (geometric mean) (A&Ww)	8 - 6410	see comment at right	Inconclusive (see comment)	
			Turbidity NTU	50 (A&Ww)	1 - 10,000	7 of 24	Not attaining (see comment*)	
K P Creek headwaters - Blue River AZ15040004-029 A&Wc, FC, FBC, AgL	ADEQ Ambient Monitoring Below K P Cienega UG0KP065.54 100888	1999 - 1 partial suite	No exceedances					(Sampled on same date as other site).
	ADEQ Ambient Monitoring @ Blue River UG0KP000.08 100889	1999 - 1 partial suite 2000 - 3 partial suites 2002 - 1 full suite	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.2 - 8.9 (65 - 94%)	2 of 5		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment.
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Attaining AgL Inconclusive	1999 - 2002 6 samples 5 sampling events	No exceedances					ADEQ collected 6 samples at 2 sites in 1999-2002. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (copper, cadmium, and zinc) and total metals (mercury, lead, and copper).
San Francisco River headwaters - New Mexico border AZ15040004-023 A&Wc, FC, FBC, AgI, AgL	ADEQ Fixed Station Above Luna Lake UGSFR059.98 100381	1999 - 3 full suites 2000 - 2 full suites 2001 - 3 full suites 2002 - 2 full suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.6 - 9.5 (72 - 100%)	1 of 10		
			Turbidity NTU	10 (A&Wc)	6 - 26	6 of 9		Two exceedances coincide with spring runoff flows.

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
	Summary Row A&Wc Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	1999 - 2002 10 sampling events	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	5.6 - 9.5 (72 - 100%)	1 of 10	Attaining	ADEQ collected 10 samples in 1999-2002. Assessed as "attaining some uses" and placed on the Planning List due to exceedances of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
			Turbidity NTU	10 (A&Wc)	6 - 26	6 of 9	Inconclusive (see comment)	
San Francisco River New Mexico border - Blue River AZ15040004-004 A&Ww, FC, FBC, AgI, AgL	ADEQ Ambient Monitoring Near Martinez Ranch UGSFR017.66 100834	1999 - 1 partial suite 2000 - 1 full + 2 partial suites 2002 - 2 full suites	Turbidity NTU	50 (A&Ww)	7 - 74	1 of 6		
	Summary Row A&Ww Inconclusive FC Attaining FBC Attaining AgI Attaining AgL Attaining	1999 - 2002 6 sampling events	Turbidity NTU	50 (A&Ww)	7 - 74	1 of 6	Inconclusive (see comment)	ADEQ collected 6 samples in 1999 - 2002. Assessed as "attaining some uses" and placed on the Planning List due to exceedance of the former turbidity standard. Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed.
San Francisco River Blue River - Limestone Gulch AZ15040004-003 A&Ww, FC, FBC, AgI, AgL	ADEQ Fixed Station 6 miles above Clifton (below mining) UGSFR011.29 100708	1999 - 2 full + 2 partial suites 2000 - 3 full + 1 partial suite 2001 - 4 full suites 2002 - 5 full suites	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - 500	1 of 13		Exceedance occurred during summer monsoon event.
			Mercury µg/L	0.6 (FC)	<0.5 - 0.75	1 of 17		Note that the exceedance occurred in one of two split samples. The other split result was less than the lab reporting limit.
			Turbidity NTU	50 (A&Ww)	1 - >999	3 of 16		Exceedances occurred during summer monsoon event.
	Summary Row A&Ww Attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1999-2002 17 sampling events	*Escherichia coli* CFU/100 ml	235 (FBC)	<2 - 500	1 of 13 events (in 2002)	Inconclusive	ADEQ collected 17 samples in 1999-2002. Assessed as "attaining some uses" and placed on the Planning List due to *Escherichia coli* exceedance.
			Mercury µg/L	0.6 (FC)	<0.5 - 0.75	1 of 17	Attaining	
			Turbidity NTU	50 (A&Ww)	1 - > 999	3 of 16	Attaining	
San Francisco River Limestone Gulch - Gila River AZ15040004-001 A&Ww, FC, FBC, AgI, AgL	ADEQ Fixed Station Below Clifton (below mining) UGSFR003.04 100382	1998 - 3 full + 1 partial suites 1999 - 3 full + 2 partial suites 2000 - 3 full + 1 partial suites 2001 - 4 full suites 2002 - 4 full + 1 partial suites	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 170	1 of 22		
				varies by hardness (A&Ww chronic)	<10 - 170	1 of 22		
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.2 - 10.3 (82 - 113%)	2 of 21		

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			PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 545	1 of 17		Exceedance occurred during summer monsoon event.
			Lead (total) µg/L	15 (FBC)	<5 - 35	1 of 22		Exceedance occurred during summer monsoon event.
			Turbidity NTU	50 (A&Ww)	<1 - > 999	4 of 21		Two samples were related to high flow events.
	Summary Row A&Ww Not attaining FC Attaining FBC Inconclusive AgI Attaining AgL Attaining	1998 - 2002 22 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 170	1 of 22 events (in 2000)	Inconclusive	ADEQ collected 22 samples in 1998 - 2002. Assessed as "not attaining" due to turbidity exceedances. *Reach was on 2002 303(d) List for turbidity. Although current data are inconclusive based on the former turbidity standard, use is assessed as "not attaining" until sufficient turbidity or suspended sediment concentration data are collected to make an assessment of "attaining" or "impaired." Turbidity and suspended sediment concentration (SSC) monitoring will be scheduled during the next monitoring cycle for this watershed. Placed on the Planning List due to copper and *Escherichia coli* exceedances.
				varies by hardness (A&Ww chronic)	<10 - 170	1 of 22 (5% exceed)	Attaining	
			Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.2 - 10.3 (82 - 113%)	2 of 21	Attaining	
			Escherichia coli CFU/100 ml	235 (FBC)	<2 - 545	1 of 17 events (in 2002)	Inconclusive	
			Lead (total) µg/L	15 (FBC)	<5 - 35	1 of 22	Attaining	
			Turbidity NTU	50 (A&Ww)	1 - > 999	4 of 21	Inconclusive (Not attaining*)	
Turkey Creek headwaters - Campbell Blue Ck AZ15040004-060 A&Wc, FC, FBC, AgL	ADEQ TMDL Program Above Campbell Blue (Site 1) UGTRY000.17 101180	2001 - 4 field	No exceedances					
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2001 4 sampling events	No exceedances					ADEQ collected four field samples in 2001. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: *Escherichia coli*, dissolved metals (cadmium, copper, and zinc), and total metals (mercury, copper, and lead).

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEARS SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCES OF STANDARDS BY SITE PARAMETER UNITS	STANDARD (DESIGNATED USE)	RANGE OF RESULTS (MEAN)	FREQUENCY EXCEEDED STANDARD	DESIGNATED USE SUPPORT	COMMENTS
LAKES MONITORING DATA								
Cluff Pond #3 AZL15040005-0370 A&Ww, FC, FBC, AgI, AgL	AGFD Routine Monitoring UGCRC - MID (mid lake)	2001 - 1 partial suite	No exceedances					Missing core parameters: *Escherichia coli*, total boron, dissolved metals (copper, cadmium, and zinc), and total metals (mercury, manganese, copper, and lead).
	Summary Row **A&Ww Inconclusive** **FC Inconclusive** **FBC Inconclusive** **AgI Inconclusive** **AgL Inconclusive**	**2001** **1 sampling event**					**Not assessed**	**Insufficient monitoring data to assess.**
Dankworth Ponds AZL15040005-0440 A&Wc, FC, FBC	ADEQ Lakes Program UGDAN-A 100018	1999 - 1 partial suite 2000 - 3 partial suites	Dissolved oxygen mg/L	7.0 (90% saturation) (A&Wc)	4.4 - 8.1 (50 - 102%)	1 of 4		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in the final assessment. Lab reporting limits for 3 other selenium samples were too high to use results for chronic standards assessment but sufficient for acute standards. Note that duplicate selenium sample did not exceed standards
			Selenium µg/L	2 (A&Wc chronic)	<5 - 25	1 of 1		
				20 (A&Wc acute)		1 of 4		
			Turbidity NTU	10 (A&Wc)	1 - 27	1 of 2		
	ADEQ Lakes Program UGDAN-B 100987	1999 - 1 field	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	4.4 (50%)	1 of 1		
	ADEQ Lakes Program UGDAN-Spring 1 (pond) 100988	1999 - 1 partial suite 2000 - 3 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	3.5 - 3.95 (51 - 59%)	4 of 4		
	ADEQ Lakes Program UGDAN-Springs 2, 3, 4 100990, 100991, 100992	1999 - 1 partial suite (at 3 springs)	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	0.2 - 2.6 (2 - 42%)	3 of 3		
	Summary Row **A&Wc Inconclusive** **FC Attaining** **FBC Inconclusive**	**1999 - 2000** **12 samples** **4 sampling events**	**Selenium** **µg/L**	**2** **(A&Wc chronic)**	**<5 - 25**	**1 of 1 event** **(insufficient events)**	**Inconclusive**	**ADEQ collected 12 samples at 4 sites in 1999-2000. Assessed as "attaining some uses" and placed on the Planning List due to exceedances of selenium and missing core parameters: *Escherichia coli* and dissolved metals (copper, cadmium, and zinc).** ***Also on the Planning List due to exceedances of the former turbidity standard. Investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed.**
				20 **(A&Wc acute)**		**1 of 4 events** **(in 2000)**	**Inconclusive**	
			Turbidity **NTU**	**10** **(A&Wc)**	**1 - 27**	**1 of 2**	**Inconclusive** **(see comment*)**	
Luna Lake AZL15040004-0840 A&Wc, FC, FBC, AgL	AGFD Routine Monitoring UGLUN - A (dam site)	1998 - 3 partial suites	Dissolved oxygen mg/L	> 7.0 (90% saturation) (A&Wc)	6.5 - 8.0 (87 - 99%)	1 of 3		
			pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	8.4 - 9.9	2 of 3		